



## **GOLIAD PROJECT**



## **Production Area Authorization**

Application for:  
PRODUCTION AREA-1 (PA-1)

August 27, 2008

**Uranium Energy Corp (UEC)**

**Goliad Project**

**Production Area Authorization Application for:**

**Production Area-1 (PA-1)**

**August 27, 2008**

**UEC**

Uranium Energy Corp

September 4, 2008

**RECEIVED**

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WASTE PERMITS DIVISION  
TEXAS COMMISSION ON  
ENVIRONMENTAL QUALITY

Mr. Ben Knape  
Team Leader  
Underground Injection Control Program  
Industrial and Hazardous Waste Permits Section  
Texas Commission on Environmental Quality  
112100 Park 35 Circle, Building F  
Austin, Texas 78753

Re: Uranium Energy Corp (UEC) Production Area Authorization Application  
Goliad Project: Permit No. URO3075

Dear Mr. Knape:

UEC is pleased to submit the enclosed Production Area (PA-1) Authorization Application for its Goliad Project. As required by the rules, 1 original and 3 copies are provided herein. UEC wishes to thank you and staff in advance for the thorough review that you will conduct on the Application. UEC will stand ready to promptly respond to any questions or requests for additional information that you may have during the review process.

Regards,

  
Craig W. Holmes  
UEC Regulatory Consultant

Attachments: As noted.

cc: Harry Anthony, Josh Leftwich and Monica Jacobs



**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**  
**APPLICATION FOR PRODUCTION AREA AUTHORIZATION**  
**IN SITU URANIUM MINING**

I. Applicant: **Uranium Energy Corp (UEC)**  
(Individual, Corporation ☒ or Other Legal Entity)  
Address: **100 East Kleberg, Suite 210**  
(Permanent Mailing Address)  
City: **Kingsville** State: **Texas** Zip: **78363**  
Telephone Number **361.592.5400**  
Mine Name: **Goliad Project** County: **Goliad**  
Mine Mailing Address (if available):  
Permit No. **URO3075**  
Production Area Identification: **Production Area-1 (PA-1)**

**Attachments for a new Production Area Authorization and most PAA amendments**

1. Mine Location Map
2. Proposed Production Area Map - Locating all Baseline and Monitor Wells
3. Cross sections of the Production Area
4. Description of the Production Area Geology and Hydrology
5. Contour Maps of Production Area TDS and Piezometric Levels
6. Well logs, Completion Reports, and Mechanical Integrity Reports (1 copy only)
7. Hydrologic Test Results and Interpretation
8. Ground Water Analysis Reports (All Baseline and Monitor Wells)
9. Ground Water Analysis Report Summary
10. Updated Mine Plan (map and schedule for entire permit area)
11. Updated Evaluation of Fluid Handling Requirements vs. Capacity
12. Proposed Restoration Table
13. Proposed Control Parameters Upper Limits Table
14. Financial Assurance Information

Received and Original  
Forwarded to Dept

SEP - 4 2008



## SIGNATURE PAGE

I, Harry L. Anthony, P.E., Chief Operating Officer  
(applicant) (title)

Certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature Harry L. Anthony, Date August 26, 2008  
(applicant or applicant's authorized agent)

-----  
**TO BE COMPLETED BY THE APPLICANT IF THE APPLICATION IS SIGNED BY AN AGENT FOR THE APPLICANT**

I, \_\_\_\_\_ hereby designate \_\_\_\_\_  
(applicant) (agent)

as my agent and hereby authorize said agent to sign any application, submit additional information as may be requested by the Commission, and/or appear for me at any hearing or before the Texas Natural Resource Conservation Commission in conjunction with this request for a Texas Water Code permit. I further understand that I am responsible for the contents of this application, for oral statements given by my agent in support of the application, and for compliance with the terms and conditions of any permit which might be issued based upon this application.

Printed or Typed Name of Applicant or Principal Executive Officer

Signature

(Note: Application Must Bear Signature & Seal of Notary Public)

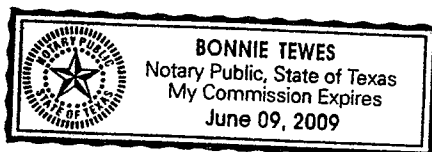
SUBSCRIBED AND SWORN to before me by the said Harry L. Anthony

on this 26<sup>th</sup> day of August, 2008.

My commission expires on the 9<sup>th</sup> day of June, 2009.

Bonnie Tewes  
Notary Public in and for

Kleberg County, Texas



# TECHNICAL REPORT

## SIGNATURE PAGE

Signature of the Technical Report Supervisor

The technical report of the application must be signed by the technical report supervisor. The supervisor must be a professional engineer, registered in the State of Texas, or a geologist. The technical report supervisor must be competent and experienced in the Class III Underground Injection Control program and be thoroughly familiar with the operation or project for which the application is made. Attach a copy of the supervisor's resume.

I, Harry L. Anthony, P.E., Chief Operating Officer  
(technical report supervisor) (title)

certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:

Harry L. Anthony

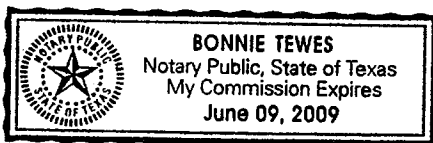
Date: August 26, 2008

(Note: Application Must Bear Signature & Seal of Notary Public)

SUBSCRIBED AND SWORN to before me by the said Harry L. Anthony

on this 26<sup>th</sup> day of August, 2008

My commission expires on the 9<sup>th</sup> day of June, 2009.



Bonnie Tewes  
Notary Public in and for

Kleberg County, Texas



## TECHNICAL REPORT FOR THE PRODUCTION AREA AUTHORIZATION IN SITU URANIUM MINING

The following are to be submitted as the Technical Report to the Application for Production Area Authorization. The applicant shall review the information to be developed with commission staff prior to beginning to collect the information because certain conditions may require additional or different information. All technical information shall be prepared in accordance with the appropriate technical guidelines. Clearly mark the chapters with the indicated chapter identification.

1. *Mine Location Map* - Provide a map that locates and identifies the lease area, permit area, and existing and proposed production areas with respect to easily identifiable landmarks such as towns or main roads. **See Chapter 1.0 and Figure 1-3, Mine Location Map.**
2. *Proposed Production Area Map* - Provide an oriented drawn to scale map locating all monitor wells, production wells, and baseline wells, and indicating acreage of the permit area, mine area, depth to the top of the production zone, and elevation of the production zone. **See Chapter 1.0 and Figure 1-4 Production Area Map.**
3. *Cross-Section of the Production Area* - Provide a detailed cross-section along the dip and strike accurately identifying all overlying aquifers, the first underlying aquifer, and the geologic interval to be mined. The geologic interval identified as the "production zone" will be the zone authorized for production by the proposed authorization. The lithologic columns shall be supported with electric logs. Indicate piezometric levels for each aquifer. **See Chapter 3.0 and Figures 3-1 through 3-5.**
4. *Description of Production Area Geology and Hydrology* - Provide a written description of the geology and hydrology of the mine area. Support the geology with maps, cross-sections showing geologic units, lithology, structural features, and other pertinent information. For hydrologic verification, include a description of the major aquifer, hydraulic gradient, water quality indicators (i.e., TDS, Na, SO<sub>4</sub>) for the mine area, and other pertinent information. **See Chapters 3.0 and 5.0.**
5. *Contour Maps of Production Area TDS and Piezometric Levels* - Provide maps showing piezometric level and TDS contours for production and non-production zone aquifers with baseline wells located and identified. **See Chapter 5.0 and its contour maps of TDS and Piezometric levels.**
6. *Well Logs, Completion Reports, and Mechanical Integrity Test Reports (1 copy)* - For all baseline and monitor wells, provide the electric well logs and completion reports. Well logs shall have the Production Zone and all aquifers clearly identified. Completion reports shall include casing depths, screened intervals, cementing data, and locations of centralizers. Mechanical integrity tests shall be conducted in accordance with 30 TAC §331.43 on all injection and recovery wells and on any other wells which are to be used to inject fluids. Mechanical integrity test results may be submitted as part of the well completion report or as a separate report. **See Appendix C, Well Logs, Completion Reports.**
7. *Hydrologic Test Results and Interpretation* - Describe in detail the hydrologic testing procedures to be used. This description should include test preparation, test procedures, schedule, and procedures for analysis and summary of the test results. The tests are conducted to:
  - a. Determine the degrees of hydrologic connection between aquifers;
  - b. Determine and locate boundaries and recharge structures; and
  - c. Verify hydrologic connection between the production zone and the production zone monitor wells.

Additional guidance will be found in Technical Guideline II - Hydrologic Testing available on the TCEQ website at: **See Chapter 4.0 Hydrologic Testing.**

[http://www.tceq.state.tx.us/assets/public/permitting/waste/uic/tech\\_guideline\\_2.pdf](http://www.tceq.state.tx.us/assets/public/permitting/waste/uic/tech_guideline_2.pdf)

8. *Groundwater Analysis Reports* - For each of the monitor wells and the baseline wells completed in the production and non-production aquifers, provide a completed Groundwater Analysis Report. **See Chapters 5.0 and 6.0.**
9. *Groundwater Analysis Report Summary* - Provide a summary of the parameter values from baseline and monitor wells showing high, average, and low parameter values for each aquifer on forms as shown in Figure 3.  
Additional guidance will be found in Technical Guideline I - Groundwater Analysis available on the TCEQ website at: **See Table 6.1.**  
[http://www.tceq.state.tx.us/assets/public/permitting/waste/uic/tech\\_guideline\\_1.pdf](http://www.tceq.state.tx.us/assets/public/permitting/waste/uic/tech_guideline_1.pdf)
10. *Restoration Progress Report*
  - a. Provide a description of restoration procedures or restoration demonstration procedures, proposed, in progress, or completed.
  - b. Provide a description of the restoration progress that currently has been achieved.
  - c. Provide a description of the fluid handling capacity of the disposal facilities required to accomplish restoration using the proposed restoration procedure within the time frame specified in the mine plan. **See Chapter 7.0.**
11. *Up-Dated Mine Plan* - Provide a mine plan to include:
  - a. Permit Area Map - An 8½ x 11" legible and reproducible plan view locating and identifying:
    - (1) Lease area boundary;
    - (2) Permit area boundary;
    - (3) Buffer areas;
    - (4) Individually proposed production areas with acreage of the areas indicated.
    - (5) Production and disposal facilities.
  - b. Schedule - A schedule indicating the dates on which it is estimated that both production and restoration will be started and completed in the mine areas identified in 11.a. above. **See Chapter 7.0, Figure 7-1 Permit Map and Table 7.1 Updated Production and Restoration Schedule.**
12. *Up-Dated Evaluation of Fluid Handling Requirements vs. Capacity* - Provide a detailed calculation and tabulation of the volume of fluids to be handled by storage and disposal facilities at their maximum, and comparative capacity of the facilities that will be available. **See Chapter 7.0 and Table 7.2 Updated Fluid Handling Requirements vs. Capacity.**
13. *Proposed Restoration Table* - Provide a proposed table based on the Groundwater Analysis Report Summary in 9 (above in accordance with 30 TAC §331.104). **See Chapter 6.0 and Table 6.2 Proposed Restoration Table.**
14. *Proposed Control Parameters Upper Limits Table* - Provide a proposed table based on the Groundwater Analysis Report Summary in 9 (above with the limit either 25% or 5 mg/l above the highest value for each parameter in accordance with 30 TAC §331.104). **See Chapter 6.0 and Table 6.5 Proposed Upper Limits Control Parameters.**
15. *Financial Assurance Information* - Provide an estimate of the number of existing wells and wells to be drilled, their average depth, and casing size. Include all monitor wells, baseline wells, injection and withdrawal wells, and any other wells necessary for the mining operation. **See Chapter 8.0 and Tables**

**8.1 and 8.2, Wells Existing and Planned for PA-1 and Total Depth of Existing Wells in PA-1, respectively.**

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## **Introduction**

Uranium Energy Corp (UEC) applied to the Texas Commission on Environmental Quality (TCEQ) for a permit to authorize in situ recovery of uranium. The permit application was filed on August 9, 2007. UEC's permit application also included a request for an aquifer exemption covering a portion (approximately 424 acres) of the proposed 1139 acre permit area. Following a comprehensive review, TCEQ issued a proposed Final Draft Permit (Area Permit NO. URO3075) on June 17, 2008. The required 30 day public notice period was completed on July 25, 2008. At this point, TCEQ is completing its response to comments.

Subsequent to filing the mine permit application, UEC began developing all of the required elements for its first Production Area Authorization (PAA) Application. Four initial production areas were identified in the Area Permit Application; however, the order in which they would be mined had not then been finalized. Of the four production sands (Sand A, Sand B, Sand C and Sand D) presented in the Area Permit Application, on-going evaluation of the project has resulted in a decision to seek a PAA for Sand B. Applications for the other production sands will be filed as soon as UEC can complete the wells and technical evaluations needed for those areas. With respect to the first production area (PA-1), the following sections provide a detailed discussion on the site-specific geology, hydrology and water quality characteristics.

**1**

## 1.0 Project Site

### 1.1 Permit Area

UEC's proposed Goliad Project is located in Goliad County. Figure 1-1 shows the general project location with respect to other Texas counties. A more detailed project location map (see Figure 1-2 in Appendix B) shows the project location with respect to various physical and cultural features within Goliad County. As can be seen from Figure 1-2, the project is located in the northern-most reaches of the county, approximately 13 miles north of the community of Goliad.

The project site is in a rural setting which is relatively remote from major population centers. The immediate area is sparsely populated, and land use is devoted primarily to agricultural activities and the energy sector (oil/gas operations and uranium exploration). The nearest population centers include: (1) Cuero which is in Dewitt County located approximately 18 miles north of the project area; (2) Goliad which is approximately 13 miles south of the project site; and (3) Victoria which is located in Victoria County is approximately 27 miles east of UEC's site. There are no major municipal water supply wells within 5 miles of the project site.

### 1.2 Initial Production Areas

Figure 1-3 (see Appendix B) is a large scale map showing the permit area and initial production areas with respect to the following:

- The topography of the site and adjacent areas;
- The proposed process plant location;
- The proposed waste disposal well locations;
- Faults;
- The proposed aquifer exemption area; and
- Various cultural features such as roads, oil and gas wells, stock tanks, wind mills, gravel pits, residences, etc.



### 1.3 Production Area-1 (PA-1)

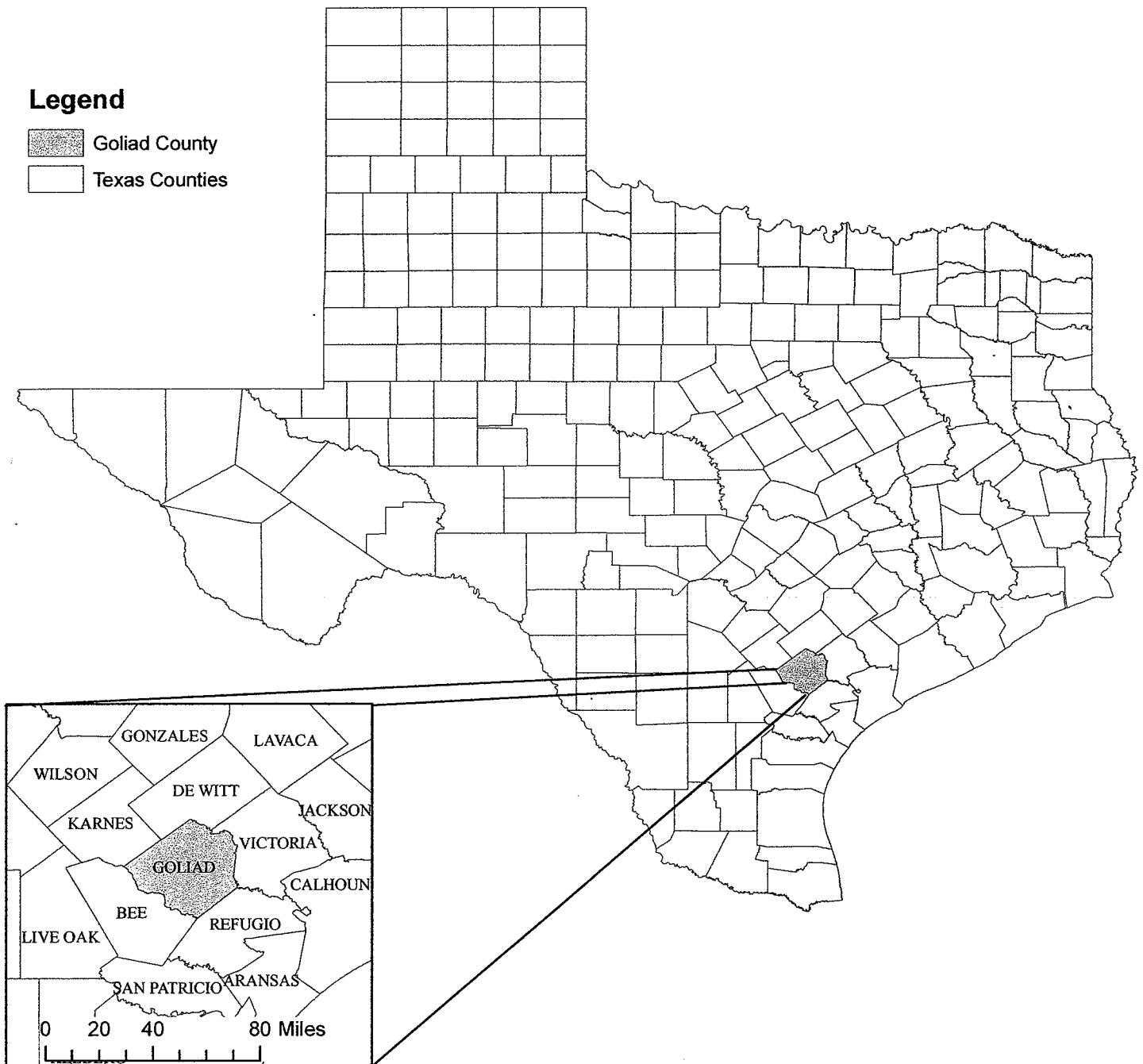
Previously referenced Figure 1-3 (see Appendix B) shows the location of PA-1 with respect to the permit boundary, the proposed aquifer exemption boundary and other project area features.

# Figure 1-1 General Project Location



## Legend

-  Goliad County
-  Texas Counties



0 165 330 660 Miles



Additional details such as Mine Area size, Production Area size, monitor well locations, baseline well locations, average depth to the production zone and the elevation, referenced to Mean Sea Level, (MSL) of the production zone are given on Figure 1-4 Production Area Map. Using data from 239 exploration holes, the production zone's depth from surface is given in Table 1.1, and its elevation (top and base with respect to MSL) is shown in Tables 1.2 and 1.3, respectively.

A review of Figure 1-4 shows that the Mine Area of PA-1 encompasses approximately 94 acres while the Production Area comprises just over 36 acres. There are 22 Production Zone Monitor Wells (BMW-1, 2, 3 ... 22) that encircle the proposed Production Zone. Interior wells labeled PT-1 through PT-6 (Pump Test Wells) and RBLB-1, 3, 4 and 5 (Regional Baseline Wells) are completed in the Production Zone. A fourth set of wells labeled as OMW-1 through OMW-9 are completed in the overlying Sand A.

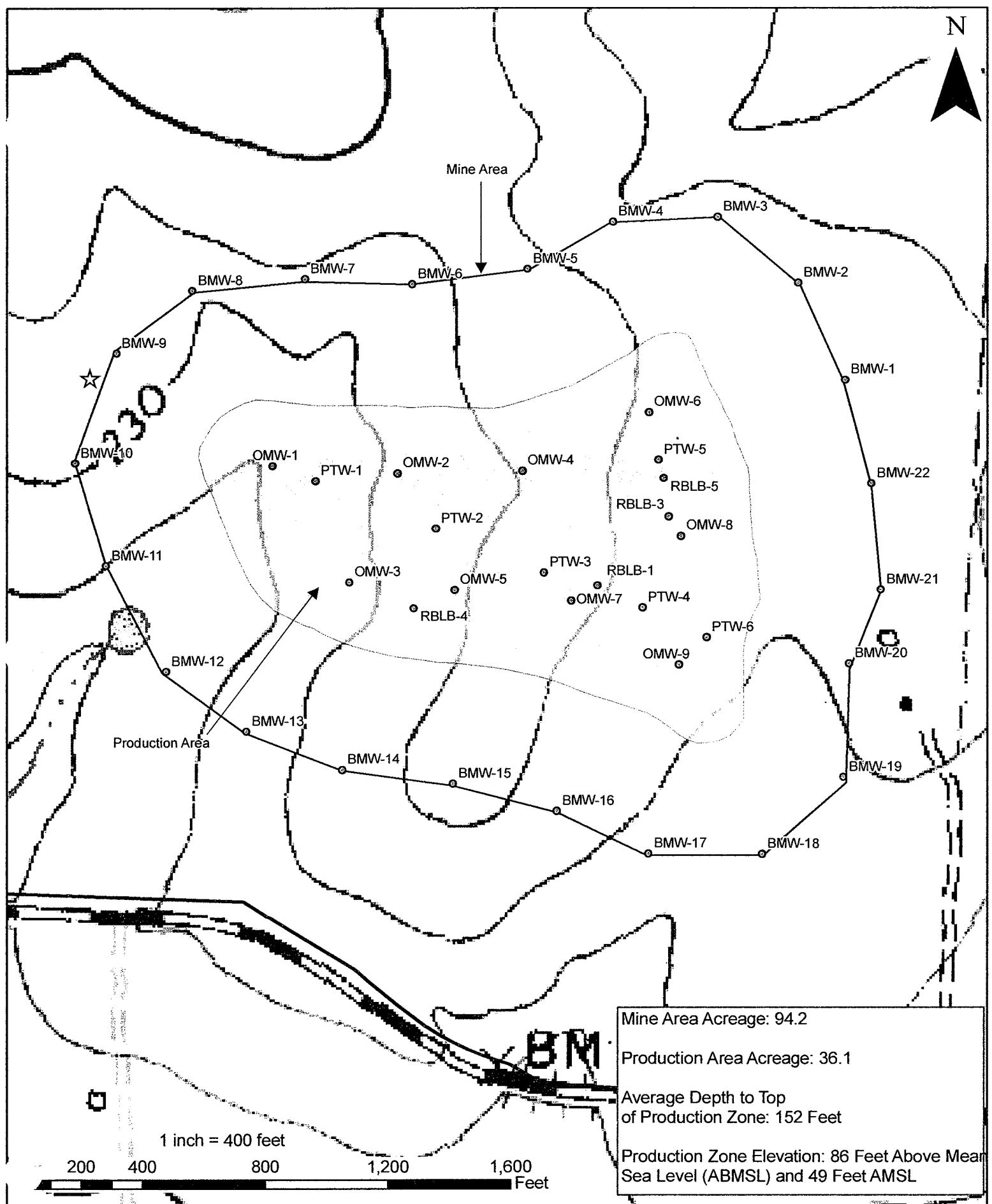
The wells shown on Figure 1-4 serve the following purposes:

- (1) To provide baseline water quality information within the Mine Area, Production Area and overlying aquifer;
- (2) To provide a basis for conducting hydrologic testing of the aquifers; and
- (3) To provide a pattern of monitor wells for near-future production and restoration activities.

The number and placement of monitor and baseline wells conform to the requirements given in 30 TAC §§§ 331.82, 103 and 104. For example, according to § 331.82(g) designated monitor wells must be at least 100 feet inside any permit boundary, unless excepted by written authorization from the Executive Director; the nearest designated monitor well in PA-1 to the Mine Permit Boundary is approximately 225 feet inside the western boundary. Distances from all other parts of the monitor well ring to the Mine Permit Boundary significantly exceed the 100 foot requirement (see Figure 1-3 in Appendix B).

In addition to following the 100-foot requirement, the monitor well ring was designed to satisfy the requirements given in § 331.103(a). The monitor wells are within 400 feet of the Production Area; they are no greater than 400 feet apart; and the angle formed by lines drawn from any production well to the two nearest monitor wells does not exceed 75 degrees.

The number of monitor wells that must be completed in the first overlying aquifer is specified in § 331.103(b). According to the rule, there must be a minimum of one well for each acre of production area.



**Figure 1-4**

**Production Area Map**

- Baseline/Monitor Wells
- Production Zone: 36.147 Acres
- Mine Area Boundary: 94.155 Acres

USGS Topographic Map  
 ☆ Proposed Plant Site



**Figure 1-4**

Drawn By: J.D.  
 Checked by: J.L. & C.H.  
 Date: August 25, 2008

Table 1.1

PAA-1: Borehole Statistics  
**Histogram of Top: SAND B**  
 Depth from Surface in Feet

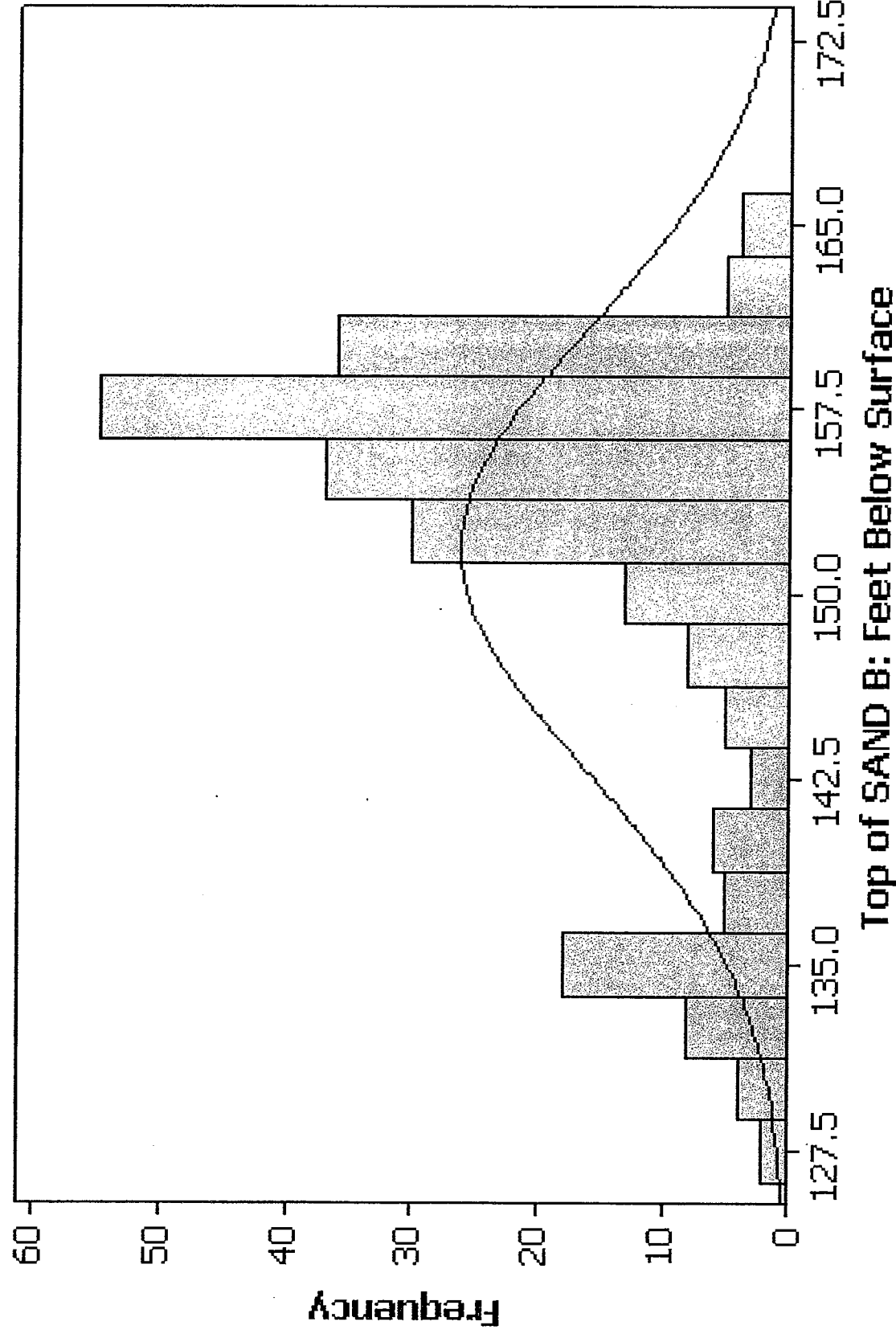
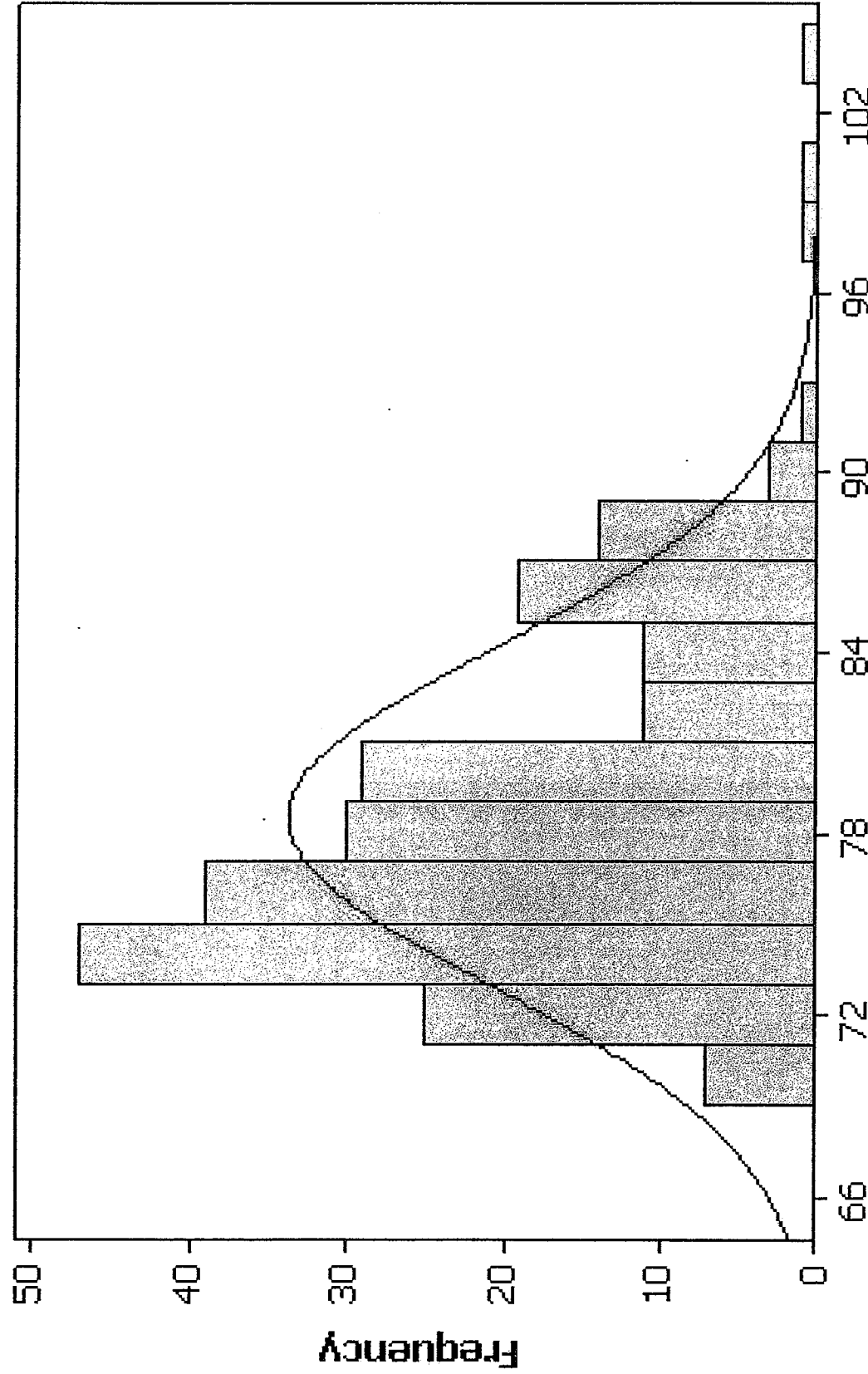


Table 1.2

PAA-1: Borehole Statistics

# Histogram of Top Elevation: SAND B

Above Mean Sea Level in Feet



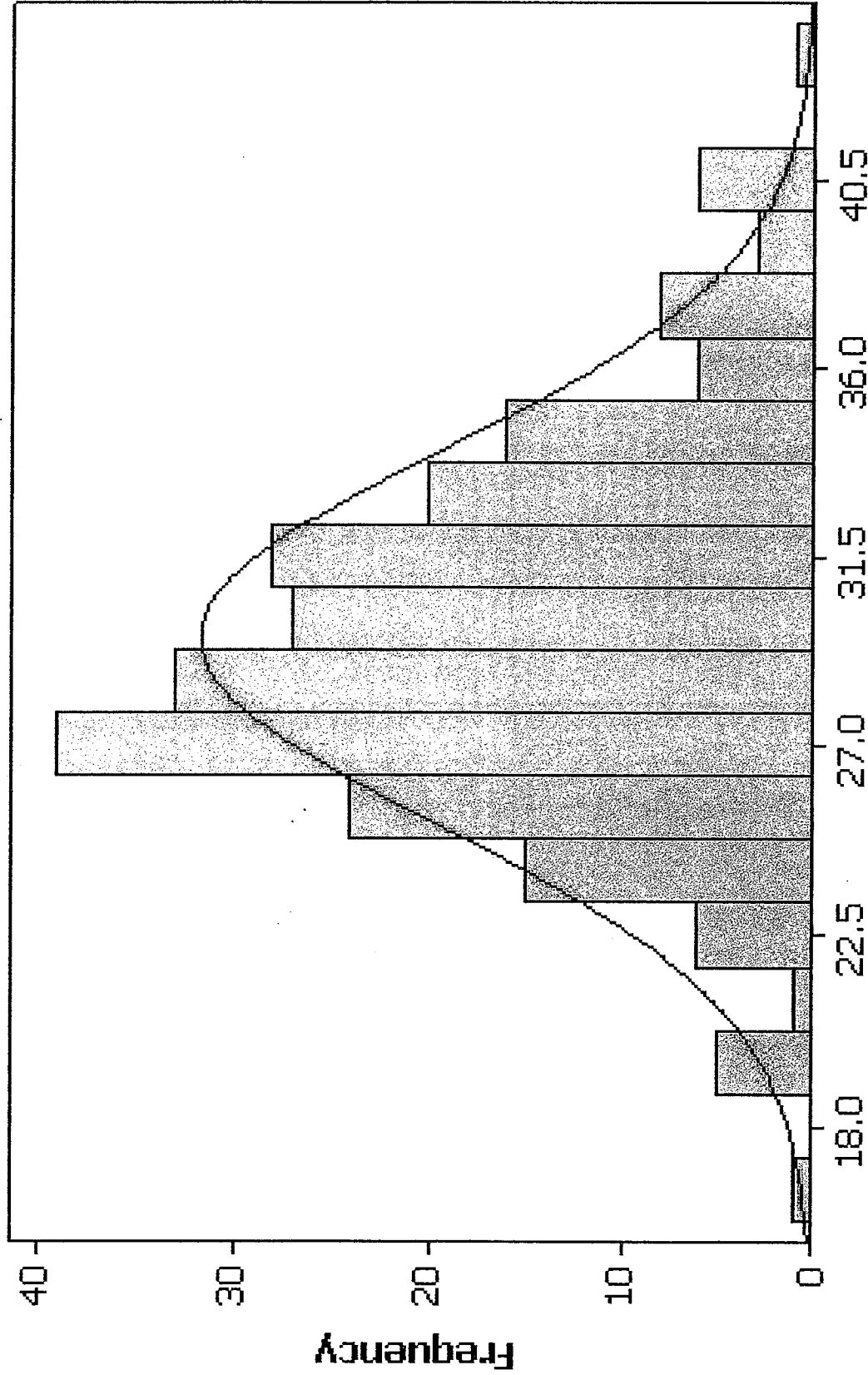
Mean	78.50
StDev	5.670
N	239

Table 1.3

PAA-1: Borehole Statistics

# **Histogram of Base Elevation: SAND B**

Above Mean Sea Level in Feet



Mean	29.54
StDev	4.518
N	239

Referring again to Figure 1-4, it can be seen that PA-1 has 36 acres of production area and 9 overlying monitor wells. The distribution of the wells above the 36 acre production zone provides significant coverage for monitoring purposes. The well pattern also served to allow baseline water quality to be assessed throughout the overlying 36 acre zone.

With respect to characterizing Production Area baseline water quality, § 331.104(a)(2) requires the collection of a minimum of one or more samples from at least 5 designated production zone wells. In developing Production Area baseline water quality, UEC exceeded the minimum requirement by completing 17 wells. Sample analyses from 10 of the wells are included in this submission. Seven additional wells are scheduled to be sampled in early September. TCEQ is planning to collect samples from some of the baseline wells during the September sampling period. UEC plans to supplement the production zone water quality baseline data with results from the upcoming sampling.

Expanding the number of samples throughout the Production Area will significantly improve the accuracy of baseline conditions, and this in turn will allow for significant improvement in reaching the goals set out in the required Restoration Table.

**2**



## **2.0     Surface and Mineral Ownership**

### **2.1     Ownership Adjacent to the Permit Area**

Surface and mineral ownership adjacent to the permit boundary was researched through county courthouse records. Owners and their contact information are summarized in Tables 2.1 and 2.2., and Figure 2-1 shows the location of the surface and mineral owners with respect to UEC's Permit Boundary.

### **2.2     Ownership within the Permit Area**

UEC retained a professional land surveyor, Black Gold Surveying & Engineering, Inc., to survey the Permit Boundary of the project site. The results of the survey are given in Figure 2-2. As can be seen from the map, the 1140.42 acre (more or less) permit boundary is presented on the Peter Gass Survey, A-129, the Squire Burns Survey A-69 and the H.M Frazier Survey A-123 and Squire Burns Survey A-70. Surface and mineral owners within the surveyed Permit Area are shown on Figure 2-3, and their contact information is listed in Table 2.3.

UEC purchased a 17 acre track of land within the permit area in 2008; the location of the tract is shown on previously referenced Figure 2-3. Black Gold Surveying & Engineering conducted a survey of the land and provided the legal description given on page 2-14. Figure 2-4 (see Appendix B) is a survey plat of the property.

**Table 2.1 Adjacent Surface Ownership**

<b>Adjacent Tracts</b>	<b>Surface Owners</b>	<b>Acres</b>	<b>Interest</b>	<b>Survey</b>
<b>1</b>	James Bluntzer 1260 Bluntzer Road Goliad TX 77963 361-645-8129	80.925	1.0000	A-69
<b>2</b>	Margaret B. Rutherford 1256 Bluntzer Rd. Goliad, TX 77963 361-645-2083	37.721	1.0000	A-69
<b>3</b>	Margaret B. Rutherford 1256 Bluntzer Rd. Goliad, TX 77963 361-645-2083	11.130	1.0000	A-69
<b>4</b>	Joseph R. Jacob 213 N. Church Goliad, TX 77963 361-645-3519	263.000	1.0000	A-251 A-118
<b>5</b>	Otto Bluntzer, Jr. 95 Mariposa Dr. Rochester, NY 14624	81.249	1.0000	A-251
<b>6</b>	Mary Bluntzer Gray P.O. Box 876 Craig, CO 81626	81.249	1.0000	A-251
<b>7</b>	Diana Schrade Slafka 12800 Plymouth Circle Anchorage, AK 99516 907-344-3506	52.740	0.5000	A-70 A-129
	Sharon Schrade Bryan 8847 Wood Lane Madisonville, TX 77864 936-348-5642	52.740	0.5000	A-70 A-129
<b>8</b>	Diana Schrade Slafka 12800 Plymouth Circle Anchorage, AK 99516 907-344-3506	80.200	0.5000	A-70 A-129
	Sharon Schrade Bryan 8847 Wood Lane Madisonville, TX 77864 936-348-5642	80.200	0.5000	A-70 A-129
<b>9</b>	Jon Arlis Adickes 14691 FM 1346 St. Hedwig, TX 78152 210-667-1848	1.500	0.3333	A-184

	Laura Sue Adickes Rogers Route 2, Box 272 Canyon, TX 79015 806-488-2313	1.500	0.3333	A-184
	Amy Lynn Adickes Wilburn Route 3 Goliad, TX 77963 361-645-1837	1.500	0.3333	A-184
10	June Bethke 1593 E. FM 1961 Goliad, TX 77963 361-645-2708	7.922	1.0000	A-184
11	St. Peter's Lutheran Church 1545 E. FM 1961 Yorktown, TX 78164 361-645-2922	0.138	1.0000	A-184
12	St. Peter's Lutheran Church 1545 E. FM 1961 Yorktown, TX 78164 361-645-2922	4.460	1.0000	A-184
13	Harold Baecker 135 N. Mesquite Victoria, TX 361-578-3738	229.860	0.2562	A-184
	Nancy Gerhardt 3210 Knoll Manor Kingwood, TX 281-360-2102	229.860	0.6082	A-184
	Glen Baecker 1451 FM RD 1961 Goliad, TX 77963 361-645-8719 361-645-1021	229.860	0.1356	A-184
14	Randy Liesman 215 E. Edgewood San Antonio, TX 78209 210-826-0358	200.310	0.5000	A-129 A-200
	Bruce D. Liesman 215 E. Edgewood San Antonio, TX 78209 210-826-5362	200.310	0.5000	A-129 A-200
15	Pam Long PO Box 222 Goliad, TX 77963 361-564-2214	28.126	1.0000	A-129
16	Jo Nell Martin 641 Crestview Drive Victoria, TX 77905 361-578-3926	28.126	1.0000	A-129

17	William & Diana Cheek 4617 Cobblestone Corpus Christie, TX 78411 361-986-1211	84.360	1.0000	A-129
18	Vergie Bitterly 1804 E. Locust Victoria, TX 77901 361-573-6147	70.411	1.0000	A-129 A-495 A-289
19	Deanna Wacker 1703 E. Locust Victoria, TX 77901 361-573-3625	70.411	1.0000	A-129 A-495 A-289
20	Cecilia Gleinser Edwards 50 P.R. 5711 Gonzales, TX 78629 830-672-8373	36.139	1.0000	A-129
21	Thomas & Mary Anklam 14859 N. US Hwy 77a-183 Yorktown, TX 78164 361-564-9152	20.000	1.0000	A-129
22	Michael & Kay Walker 5964 FM 1351 Goliad, TX 77963 361-645-1925	64.330	1.0000	A-129
23	Craig Layne Duderstadt 722 Duderstadt Road Yorktown, TX 78164 361-564-2081	100.000	1.0000	A-129
24	Ernest & Frances Hausman Revoacable Living Trust 103 Oxford Drive San Antonio, TX 78213 210-344-1448	261.370	1.0000	A-69
25	Diana Schrade Slafka 12800 Plymouth Circle Anchorage, AK 99516 907-344-3506	193.100	0.5000	A-69
	Sharon Schrade Bryan 8847 Wood Lane Madisonville, TX 77864 936-348-5642	193.100	0.5000	A-69

**Table 2.2 Adjacent Mineral Ownerhship**

<b>Adjacent Tracts</b>	<b>Mineral Owners</b>	<b>Acres</b>	<b>Interest</b>	<b>Survey</b>
<b>1</b>	James Bluntzer 1260 Bluntzer Road Goliad TX 77963 361-645-8129	80.925	1.0000	A-69
<b>2</b>	Margaret B. Rutherford 1256 Bluntzer Rd. Goliad, TX 77963 361-645-2083	37.721	1.0000	A-69
<b>3</b>	Margaret B. Rutherford 1256 Bluntzer Rd. Goliad, TX 77963 361-645-2083	11.130	1.0000	A-69
<b>4</b>	Joseph R. Jacob 213 N. Church Goliad, TX 77963 361-645-3519	263.000	1.0000	A-251 A-118
<b>5</b>	Otto Bluntzer, Jr. 95 Mariposa Dr. Rochester, NY 1462	81.249	1.0000	A-251
<b>6</b>	Mary Bluntzer Gray P.O. Box 876 Craig, CO 81626	81.249	1.0000	A-251
<b>7</b>	Diana Schrade Slafka 12800 Plymouth Circle Anchorage, AK 99516 907-344-3506	52.740	0.5000	A-70 A-129
	Sharon Schrade Bryan 8847 Wood Lane Madisonville, TX 77864 936-348-5642	52.740	0.5000	A-70 A-129
<b>8</b>	Diana Schrade Slafka 12800 Plymouth Circle Anchorage, AK 99516 907-344-3506	80.200	0.5000	A-70 A-129
	Sharon Schrade Bryan 8847 Wood Lane Madisonville, TX 77864 936-348-5642	80.200	0.5000	A-70 A-129

9	Jon Arlis Adickes 14691 FM 1346 St. Hedwig, TX 78152 210-667-1848	1.500	0.3333	A-184
	Laura Sue Adickes Rogers Route 2, Box 272 Canyon, TX 79015 806-488-2313	1.500	0.3333	A-184
	Amy Lynn Adickes Wilburn Route 3 Goliad, TX 77963 361-645-1837	1.500	0.3333	A-184
10	June Bethke 1593 E. FM 1961 Goliad, TX 77963 361-645-2708	7.922	1.0000	A-184
11	St. Peter's Lutheran Church 1545 E. FM 1961 Yorktown, TX 78164 361-645-2922	0.138	1.0000	A-184
12	St. Peter's Lutheran Church 1545 E. FM 1961 Yorktown, TX 78164 361-645-2922	4.460	1.0000	A-184
13	Harold Baecker 135 N. Mesquite Victoria, TX 361-578-3738	229.860	0.5000	A-184
	Nancy Gerhardt 3210 Knoll Manor Kingwood, TX 281-360-2102	229.860	0.5000	A-184
14	Randy Liesman 215 E. Edgewood San Antonio, TX 78209 210-826-0358	200.310	0.2500	A-129 A-200
	Bruce D. Liesman 215 E. Edgewood San Antonio, TX 78209 210-826-5362	200.310	0.2500	A-129 A-200
	Glyn Jacobs 29930 Cibolo Ct. Fair Oaks Ranch, TX 78015 830-755-8778	200.310	0.2500	A-129 A-200
	Cynthia Gail Garrett 367 US Hwy 183S Cuero, TX 77954	200.310	0.1250	A-129 A-200

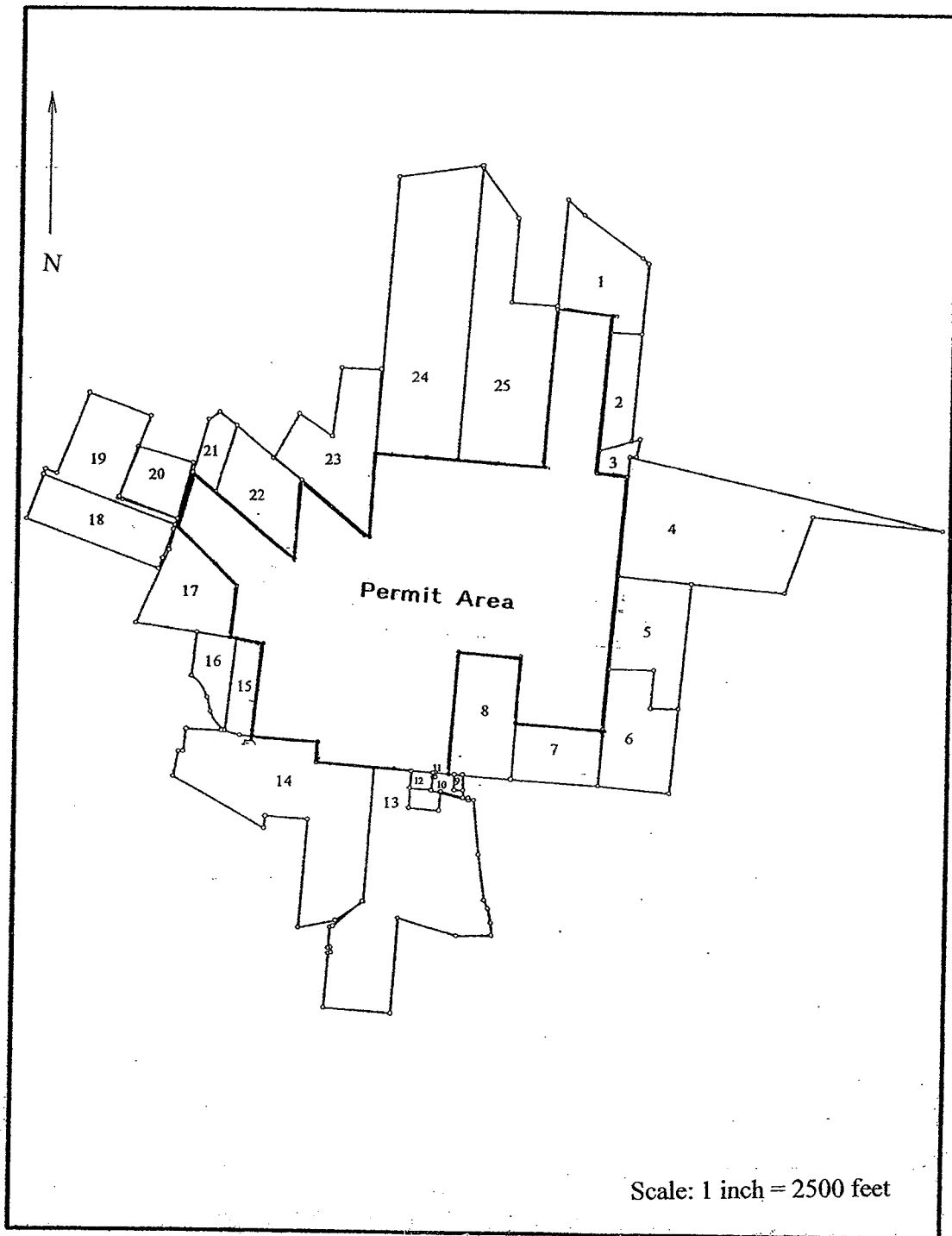
	Keith Wayne Schindler 367 US Hwy 183S Cuero, TX 77954 361-275-8076	200.310	0.1250	A-129 A-200
15	Pam Long PO Box 222 Goliad, TX 77963 361-564-2214	84.360	0.3333	A-129
	Jo Nell Martin 641 Crestview Drive Victoria, TX 77905 361-578-3926	84.360	0.3333	A-129
	Bonnie Schley Route 4, Box 46 Cuero, TX 77954 361-277-3083	84.360	0.3333	A-129
16	Jo Nell Martin 641 Crestview Drive Victoria, TX 77905 361-578-3926	84.360	0.3333	A-129
	Pam Long PO Box 222 Goliad, TX 77963	84.360	0.3333	A-129
	Bonnie Schley Route 4, Box 46 Cuero, TX 77954 361-277-3083	84.360	0.3333	A-129
17	William & Diana Cheek 4617 Cobblestone Corpus Christie, TX 78411 361-986-1211	84.360	1.0000	A-129
18	Vergie Bitterly 1804 E. Locust Victoria, TX 77901 361-573-6147	70.411	0.2500	A-129 A-495 A-289
	Deanna Wacker 1703 E. Locust Victoria, TX 77901	70.411	0.2500	A-129 A-495 A-289
	Dwane Bruns 11638 FM 622 Goliad, TX 77963 361-645-2044	70.411	0.2500	A-129 A-495 A-289
	Reta Bruns Brown Weesatche Hwy Goliad, TX 77963 361-645-3917	70.411	0.2500	A-129 A-495 A-289

19	Deanna Wacker 1703 E. Locust Victoria, TX 77901 361-573-3625	70.411	1.0000	A-129 A-495 A-289
	Dwane Bruns 11638 FM 622 Goliad, TX 77963 361-645-2044	70.411	0.2500	A-129 A-495 A-289
	Reta Bruns Brown Weesatche Hwy Goliad, TX 77963 361-645-3917	70.411	0.2500	A-129 A-495 A-289
	Vergie Bitterly 1804 E. Locust Victoria, TX 77901 361-573-6147	70.411	0.2500	A-129 A-495 A-289
20	Cecilia Gleinser Edwards 50 P.R. 5711 Gonzales, TX 78629 830-672-8373	36.139	1.0000	A-129
21	Thomas & Mary Anklam 14859 N. US Hwy 77a-183 Yorktown, TX 78164 361-564-9152	20.000	0.0313	A-129
	Michael & Kay Walker 5964 FM 1351 Goliad, TX 77963 361-645-1925	20.000	0.0938	A-129
	Edna & Russell Jarvis 2401 Repsdorph Road Kemah, TX 77565 281-326-0314	20.000	0.5000	A-129
	Jackie Parks 563 Mission Valley Road Cuero, TX 77954 361-277-8318	20.000	0.1875	A-129
	Scott & Margaret Fagan 802 N. Carancahua St., Ste 1655 Corpus Christi, TX 78470 361-992-7171	20.000	0.1875	A-129
22	Michael & Kay Walker 5964 FM 1351 Goliad, TX 77963 361-645-1925	64.330	0.1250	A-129
	Edna & Russell Jarvis 2401 Repsdorph Road Kemah, TX 77565 281-326-0314	64.330	0.5000	A-129
	Jackie Parks 563 Mission Valley Road Cuero, TX 77954 361-277-8318	64.330	0.1875	A-129



	Scott & Margaret Fagain 802 N. Carancahua St., Ste 1655 Corpus Christi, TX 78470	64.330	0.1875	A-129
23	Darwyn & Waynell Duderstadt 1708 Wise Road Yorktown, TX 78164 361-564-2958	100.000	1.0000	A-129
24	Ernest & Frances Hausman Revoacable Living Trust 103 Oxford Drive San Antonio, TX 78213 210-344-1448	261.370	1.0000	A-69
25	Diana Schrade Slafka 12800 Plymouth Circle Anchorage, AK 99516 907-344-3506	193.100	0.5000	A-69
	Sharon Schrade Bryan 8847 Wood Lane Madisonville, TX 77864 936-348-5642	193.100	0.5000	A-69

**Figure 2-1 Adjacent Surface and Mineral Ownership**



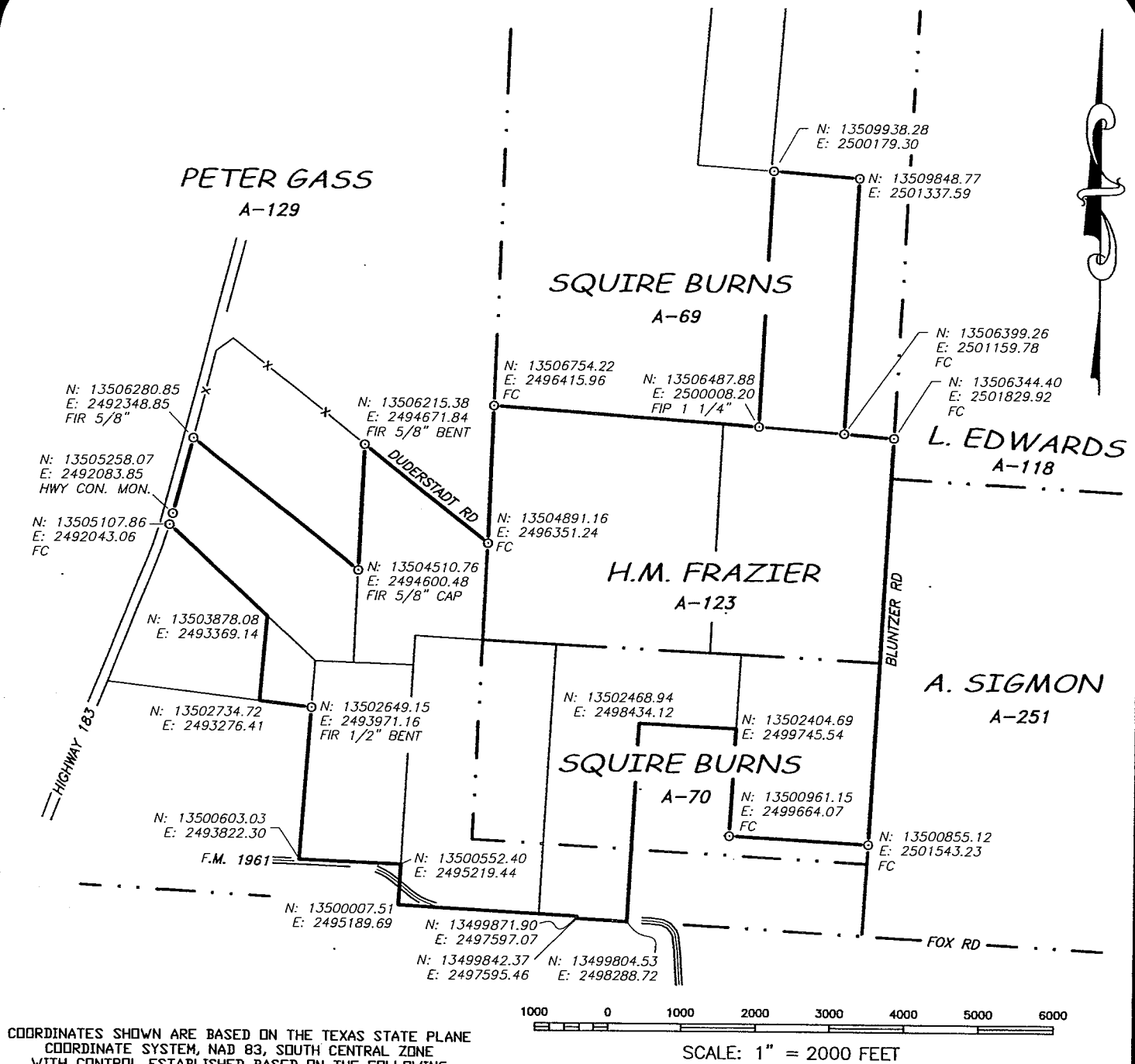


Figure 2-2 MAP OF:

PERMIT AREA FOR:

**URANIUM ENERGY CORP.**

BEING 1,140.42 ACRES, MORE OR LESS, OUT OF THE PETER GASS SURVEY, A-129, THE SQUIRE BURNS SURVEY, A-69, THE H.M. FRAZIER SURVEY, A-123 AND THE SQUIRE BURNS SURVEY, A-70, ALL IN GOLIAD COUNTY, TEXAS, AND BEING LOCATED APPROXIMATELY 13.3 MILES N 08°09' E OF GOLIAD, TEXAS.

I HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, AND BELIEF, AS SURVEYED ON THE GROUND, JULY 16 & 19, 2007.

*Trey L. McDermett*

TREY L. McDERMETT  
R.P.L.S. # 5652

**BLACK GOLD SURVEYING & ENGINEERING, INC.**

Land & Oilfield Surveying  
2711 West Front St. P.O. Box 3416  
Alice, Texas 78333  
blackgoldsurveying@sbcglobal.net  
(361) 668-9200 Fax (361) 668-9204

PLOT DATE: 07-20-07 10:12 AM

JOB #: 070633

Completion Date: 7-20-07	File Name: 070633
Scale: 1"=2000'	Surveyed by: TM/FT
Drawn by: TM/DT	Checked by: TM/DT



Figure 2-3 Ownership Within Permit Area Draft



Figure 2-3

- Permit Boundary
- Lease Lines



Map Created August 27, 2008

1 inch = 1,400 feet



Table 2.3 Ownership within the Permit Area

1	Gary Halepeska 962 Bluntzer Rd. Goliad, TX 77963
2	Elder Abrameit 1005 FM 622 Victoria, TX 77905
3	Margaret Braquet c/o Sydney Braquet 1324 Cortland Street #1 Houston, TX 77008
4	David Cheek 14319 North U.S. Hwy 183 Yorktown, TX 78164
5	R.G. Stanford 695 Stanford Lane Victoria, TX 77905
6	Sharon Schrade Bryan 8847 Wood Lane Madisonville, TX 77864
6	Diana Schrade Slafka 12800 Plymouth Circle Anchorage, AK 99516
7	Uranium Energy Corp 9801 Anderson Mill Road, Suite 230 Austin, Texas 78750

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Note: See Figure 2-3 for owner location.

**BLACK GOLD SURVEYING & ENGINEERING, INC.**

2711 West Front St. P.O. Box 3416  
Alice, Texas 78333  
Ph (361) 668-9200 Fax (361) 668-9204  
[blackgoldsurveying@sbcglobal.net](mailto:blackgoldsurveying@sbcglobal.net)

**17.0 ACRE TRACT**

Uranium Energy Corp.  
Goliad County, Texas

Being a 17.0 acre tract located in the Northwest corner of a called 84.60 acre tract, described as Parcel 2 (Margaret G. Braquet) in Volume 249, Page 148 in the Deed Records of Goliad County, Texas. Said 17.0 acre tract also being out of the *PETER GASS* Survey, Abstract Number 129 and being located approximately 13.6 miles N 06°56' E of Goliad, Texas. This 17.0 acre tract being more particularly described as follows:

**BEGINNING** at a railroad tie (Y=13,503,275.61 and X=2,494,018.78), being the Northwest corner of said Parcel 2, same being a corner of a called 84.3624 acre tract (R.G. Stanford), as recorded in Volume 257, Page 115 in the Deed Records and a called 84.3624 acre tract (William David Cheek, et ux), as recorded in Volume 178, Page 346 in the Official Records of Goliad County, Texas, for the Northwest corner of this herein described tract;

**THENCE-S 88°19'30" E** (called S 86°30' E), a distance of 528.41 feet to a railroad tie, being on the North line of said Parcel 2 for the Southeast corner of said R.G. Stanford tract and the Southwest corner of a called 84.3624 acre tract (Elder Abrameit), as recorded in Volume 256, Page 432 in the Deed Records of Goliad County, Texas, for the Northeast corner of this herein described tract;

**THENCE-S 04°12'17" W**, a distance of 1,402.78 feet to a 5/8" iron rod set for the Southeast corner of this herein described tract;

**THENCE-N 88°19'30" W**, a distance of 528.41 feet to a 5/8" iron rod set for the Southwest corner of this herein described tract;

**THENCE-N 04°12'17" E** (called N 05°15' E), along and with the West line of said Parcel 2, same being the East line of a called 84.3624 acre tract, as recorded in Volume 400, Page 859 in the Deed Records of Goliad County, Texas, and the East line of said William David Cheek, et ux tract, a distance of 1,402.78 feet to the **POINT OF BEGINNING** and containing 17.0 acres, more or less, within these metes and bounds.

*All bearings, coordinates and acreage are based on the Texas State Plane coordinate system, NAD83, South Central Zone, with control established based on the following values for NGS station*

*"SCHROEDER"*

*Y=13,484,798.35 and X=2,539,542.22*

**3**

### 3.0 Production Area Geology and Hydrology

The affixed seal covers the entire contents of this chapter.





### **3.0 Production Area Geology and Hydrology**

#### **3.1 Geology**

The permit area is located within the outcrop of the Goliad Sand. The Goliad Sand generally consists of up to 500 feet of light colored sand and sandstone (typically impregnated with caliche) interbedded with clay and gravel. In Goliad County, the subsurface strata generally strike from southwest to northeast and dip to the southeast at approximately 20 feet/mile near the outcrop, and up to 70 feet/mile away from the outcrop (Dale, et al., 1957).

As will be seen in the sections to follow, the descriptive surface and subsurface geology will mirror that given in UEC's Mine Permit Application (MPA), and the same can be said for site-specific hydrology. Because of the expanded database (e.g., the completion of a significant number of monitoring and baseline wells; additional baseline water quality testing; additional exploration/delineation holes; and the completion of hydrologic testing), the subsequent discussions provide a higher level of information and a refinement of the Production Area (PA-1).

As described in Chapter 1.0, the Mine Area (the area encompassed by the Monitor Well Ring) in PA-1 is approximately 94 acres and the Production Area is a little over 36 acres. In preparing a detailed geologic study of PA-1, four dip and strike cross-sections were constructed. The locations where the cross-sections transect PA-1 are shown on Figure 3-1 Cross-section Index Map (see Appendix B). Figure 3-1 also identifies the exploration holes and wells that were used in constructing the cross-sections.

### 3.1.1 Stratigraphy and Lithology

Within the permit area, the Goliad Formation consists predominantly of fluvial facies, having a relatively high sand content. The up dip parts of the sand axes contain abundant amounts of coarse grained sand and gravel deposited by braided streams and grade down dip into meanderbelt deposits. Farther down dip, the fluvial system grades into deposits of a wave-dominated deltaic system. Generally, the relict river systems to the north of the San Antonio River carried higher sand loads than the relict river systems to the south (Solis, 1981).

The Goliad Formation is approximately 400 feet thick in the permit area, and it is divided into four discrete sand units: Sand A, Sand B, Sand C, and Sand D. Each of the sand units, with the exception of a portion of Sand A across the Northwest Fault, is overlain and underlain by a relatively thick clay/shale layer throughout the permit area. Each of these sand units appears to constitute a discrete individual aquifer unit within the permit area. Figures 3-2 through 3-5 are detailed strike and dip oriented cross-sections through PA-1 which show the stratigraphical, lithological, and structural relationships of the individual sand units. Individually, each of the sand units is confined above and below by a clay/shale layer. Continuity of the confining zones establishes the basis for sand unit definition. The confinement discussed above was thoroughly evaluated by hydrologic pump tests, and the results confirm the effectiveness of the extensive confining layers across PA-1 (see Chapter 4.0, Hydrologic Testing).

Sand A is the upper-most sand in the permit area. In the MPA it was shown that Sand A is overlain by a clay/shale confining layer which has a thickness ranging from about 50 to 70 feet. With the exception of where it outcrops across the Northwest Fault, the clay/shale confining layer is persistent throughout the permit area on the down thrown of the Northwest Fault where production is being planned.

The approximate thickness of Sand A in PA-1 ranges from about 45 to 70 feet (see cross-sections). The upper and lower boundaries of Sand A are discernible on electric logs, and generally quite clear in drill cutting samples. As indicated on the cross-sections the unit is pervasive throughout PA-1. The average depth to the base of Sand A is 99 feet below ground level (BGL) and the average thickness is 65 feet.

Sand B is the next lower sand unit below Sand A. The average depth to the top of Sand B is approximately 152 feet BGL. Sand B, the production zone of PA-1, ranges in thickness from 30 to 50 feet across PA-1 (see Figure 3-6 Net Sand Map in Appendix B). The confining layer between Sand A and Sand B is shown on Figure 3-7 Isopach Map – Thickness of Overlying Confining Layer (see Appendix B). From this figure, it can be seen that the two sands are isolated from each other by a substantially thick clay/shale barrier ranging between 40 and 50 feet in thickness.

Referring again to the cross-sections, it can be seen that Sand C is the third unit, and a proposed production zone, encountered below the surface. The average depth to the top of Sand C is 233 feet BGL and the average depth to the base of Sand C is 269 feet BGL, resulting in an average thickness is 36 feet. Sand C is isolated from overlying Sand B by approximately 20 to 30 feet of clay/shale (see Figure 3-8 in Appendix B).

Sand D is the second underlying sand unit below Sand B. As demonstrated in the MPA, Sand D is isolated from the overlying Sand C and the underlying Lagarto Formation by shale/clay confining layers. A number of the logs in the cross-sections show the Lagarto Clay at the base of Sand D. The average depth to the base of Sand D is 385 feet BGL and its average thickness is 80 feet.

The Lagarto Formation (aka Lagarto Clay) of the Fleming Group (Miocene) underlies the Goliad in the permit area and extends from the base of the Goliad to a depth of approximately 1600 feet BGL. The upper Lagarto looks very similar lithologically to the Goliad. In general, the upper part of the Lagarto is sandier than the middle and lower portions. The sands in the upper portion of the Lagarto are considered part of the Evangeline Aquifer System; however the sands are separated from the overlying Goliad by relatively thick clay layers and probably constitute a discrete aquifer system comprising the first underlying aquifer. In general, the Lagarto is described as clay and sandy clay with intercalated beds of sand and sandstone (Dale, et al., 1957).

The Lagarto is underlain by the Oakville Sandstone (Fleming Group-Miocene). The Oakville unconformably overlies the Catahoula Tuff and crops out to the west and northwest of Goliad County. The Oakville consists of up to 700 feet of crossbedded sand and sandstone interbedded with lesser amounts of sandy, ashy, bentonitic clay.

### 3.1.2 Structural Geology

As indicated on previously referenced cross-sections and project maps, two strike oriented (southwest to northeast) normal faults are present in the permit area. Based on limited discernable fault intercepts on geophysical logs from exploration holes drilled near the faults, both faults have been determined to be high angle with dips of 65 to 70 degrees. Consequently, the faults are mapped primarily based on stratigraphic offset of correlative beds as indicated on the cross-sections. The fault in the northwest portion of the project area is downthrown on the south side of the fault and demonstrates variable offset but generally indicates approximately 75-80 of the Sand A structural surface.

The fault in the southeast portion of the project area is downthrown to the north side, thus forming a graben structure with the northwest fault through the middle of the mine permit area. Displacement along this fault is approximately 35 feet.

The proposed PA-1 production area is situated entirely within the graben and there are no identified structural features associated with the proposed PA-1 area. Both faults completely traverse the mine permit area and thus their extent in the north-south direction has not been delineated.

### 3.2 Production Area Hydrology

The following is a brief overview of site hydrology along with an identification of the various sands and confining layers. The purpose of the overview is to provide a general background to site-specific conditions. Because hydrologic pump testing was completed for PA-1, considerably more detail of the site's hydrologic properties is given in Section 4.0 Hydrologic Testing.

It was discussed in the MPA that groundwater movement across the site is generally to the southeast and that the hydraulic gradient is approximately 5.5 feet per mile. It was also estimated in the MPA that groundwater flow is approximately 6.7 feet per year. Additional information from the pump tests show that groundwater flow is approximately 7.9 feet per year.

It was stated in the section on geology herein and in the MPA that on a regional basis the Goliad may be viewed as a single, large aquifer system. It was also noted in the MPA that on a site-specific level (i.e., the permit area) each of the four sands functions as an isolated aquifer; the results of the hydrologic pump test clearly show the isolation of the four sands from each other. Following is a summary description of the aquifers present within the project area.

At UEC's project site, the Goliad Sand outcrops at the surface and is part of the first aquifer unit encountered in the subsurface (previously referenced Sand A). As described in the MPA, the Goliad is entirely contained within the Evangeline Aquifer; however the aquifer unit also extends into sands within the upper portion of the underlying Fleming Group. The Evangeline is typically wedge shaped and thickens significantly toward the coast. The Evangeline has a high sand-clay ratio and is a prolific aquifer moving towards the coast (Baker, 1979). In Goliad County, the Goliad Sand consists of up to 500 feet of predominantly sand containing some clay and gravel beds and is reported to yield small supplies of variable quality water to wells (Dale, et al., 1957).

The Burkeville Confining System lies beneath the Evangeline Aquifer in the regional study area. The Burkeville is a hydrostratigraphic unit that separates the Evangeline Aquifer from the underlying Jasper Aquifer. The Burkeville generally corresponds to the Lagarto Clay of the Fleming Group and contains a relatively large percentage of silt and clay compared to the overlying and underlying aquifers and retards the interchange of water between the aquifers (Baker, 1979).

In Goliad County, the Lagarto Clay consists of 800 to 1,200 feet of clay and sandy clay containing interbedded layers of sand and sandstone capable of yielding moderately large quantities of water to wells (Dale, et al., 1957).

The Jasper Aquifer lies beneath the Burkeville Confining System in the Texas Coastal Plain region. In the regional study area, the base of the Jasper Aquifer corresponds with the base of the Oakville Sandstone of the Fleming Group and generally denotes the base of the USDW.

The uppermost aquifer within the UEC Permit Area is the Evangeline Aquifer. In general, the Evangeline Aquifer consists of the Goliad Sand in the regional study area.

However, the boundary of the Evangeline may extend into the sands of the underlying Lagarto Clay of the Fleming Group. The Goliad Sand is reported to unconformably overlie the Lagarto Clay; however the basal sands of the Goliad are hard to distinguish from the sand beds within the upper portion of the Lagarto (Dale, et al., 1957). In general, the Goliad Sand consists of up to 500 feet of predominantly light colored, fine to coarse grained, sand and sandstone with interbedded clay and gravel. The sand and gravel are typically impregnated and cemented with caliche, which imparts the characteristic light color to the sands. The Goliad is reported to yield small quantities of variable quality water to wells in Goliad County. In the UEC permit area the base of the Goliad occurs at an approximate depth of 400 feet BGL.

The four sands (Sand A, Sand B, Sand C and Sand D) in the mine area were described in Section 3.1.1 in terms of their depths, elevations, thicknesses and confining layers and therefore the descriptions will not be repeated here.

The Lagarto Clay (Fleming Group) is the next stratigraphic unit encountered beneath the Goliad Sand. The Lagarto conformably overlies the Oakville Sandstone in Goliad County. The Lagarto is reported to consist of up to 1200 feet of dark colored clay and sandy clay with intercalated beds of sand and sandstone. In the permit area, the sand beds contain fresh water, which may be of better quality than that found in the overlying Goliad (Dale, et al. 1957). In general, the upper part of the Lagarto is sandier than the middle and lower portions. The sands in the upper portion of the Lagarto are considered to be part of the Evangeline Aquifer System; however the sands are separated from the overlying Goliad by relatively thick clay layers and probably constitute a discrete aquifer system comprising the first underlying aquifer. The middle and lower portions of the Lagarto constitute the Burkeville Confining System hydrostratigraphic unit described previously.

However, discrete sands within the lower and middle Lagarto may contain large supplies of fresh water, which is reported to be under artesian pressure in the middle part of Goliad County (Dale, et al.1957). The town of Goliad, which is located approximately 14-miles to the south of the permit area, utilizes municipal water supply wells producing from the Lagarto Clay.

The Lagarto is underlain by the Oakville Sandstone. The Oakville generally comprises the Jasper Aquifer System and essentially is the base of the USDW in the proposed UEC Permit Area. The Oakville consists of up to 700 feet of cross-bedded sand and sandstone interbedded with lesser amounts of sandy, ashy, bentonitic clay (Dale, et al. 1957).

#### 3.2.1 Water Quality Indicators

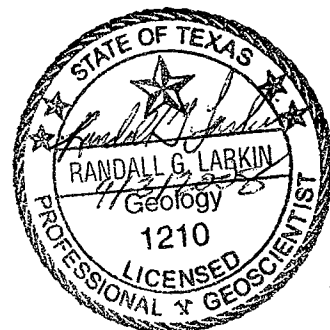
A comprehensive baseline water quality sampling program was conducted for PA-1. The Mine Area, Production Area and overlying Non-production Zone were analyzed for 26 water quality parameters. In addition, water levels recorded and potentiometric surface maps were made for the area. A full discussion on these elements of the aquifers is the subject of Chapters 5.0 and 6.0 of this Application.



**4**

## 4.0 Hydrologic Testing

The affixed seal covers the entire contents of this chapter.



#### **4.0     Hydrologic Testing**

The hydrologic testing was performed to comply with TCEQ requirements to obtain a Production Area Authorization (PAA) for in-situ uranium recovery. These requirements stipulate that hydrologic testing must be used to quantify the response of the aquifer that will be mined. PAA-1 is located in Goliad County, near Weesatche, Texas. Hydrologic testing was performed at the PAA-1 site on July 8 through July 15, 2008.

##### **4.1     Test Methodology, Procedures and Goals**

The goals, test location, methodology and procedures are discussed in the sections that follow.

The first goal was to confirm that there is hydraulic communication between the monitoring well ring and the wells within the production zone sand (Sand B). This was accomplished by pumping the interior wells completed in the production zone and recording the water levels in the monitoring well ring to show that the production zone monitor wells will in fact be able to detect fluid movement from where uranium recovery is occurring (the production zone). During recovery operations, a net drawdown or “bleed” is maintained in the ore zone by producing (i.e., removing) approximately 1% more water than the amount being injected. This means that there will be a hydraulic barrier to prevent fluid from moving out of the production zone. As an added measure of safety, water quality in the monitor wells must be monitored throughout the recovery and restoration phases of the operation.

The second goal was to analyze the pumping test results. This was done to obtain data on the aquifer’s hydraulic characteristics such as transmissivity, storativity, and hydraulic conductivity.

Also, if the data can be analyzed using standard hydrologic techniques, it demonstrates that the drawdown was indeed induced by the testing and not some incidental activity. Both the drawdown phase and the recovery phase of the test were recorded and analyzed.

The third goal was to determine if there is hydraulic communication between the ore sand and the overlying water-bearing zone. The area in Production Area-1 (PA-1) has only one overlying aquifer; Sand A. It is necessary to establish that there is no communication between the fluids in the ore zone and water in overlying aquifers.

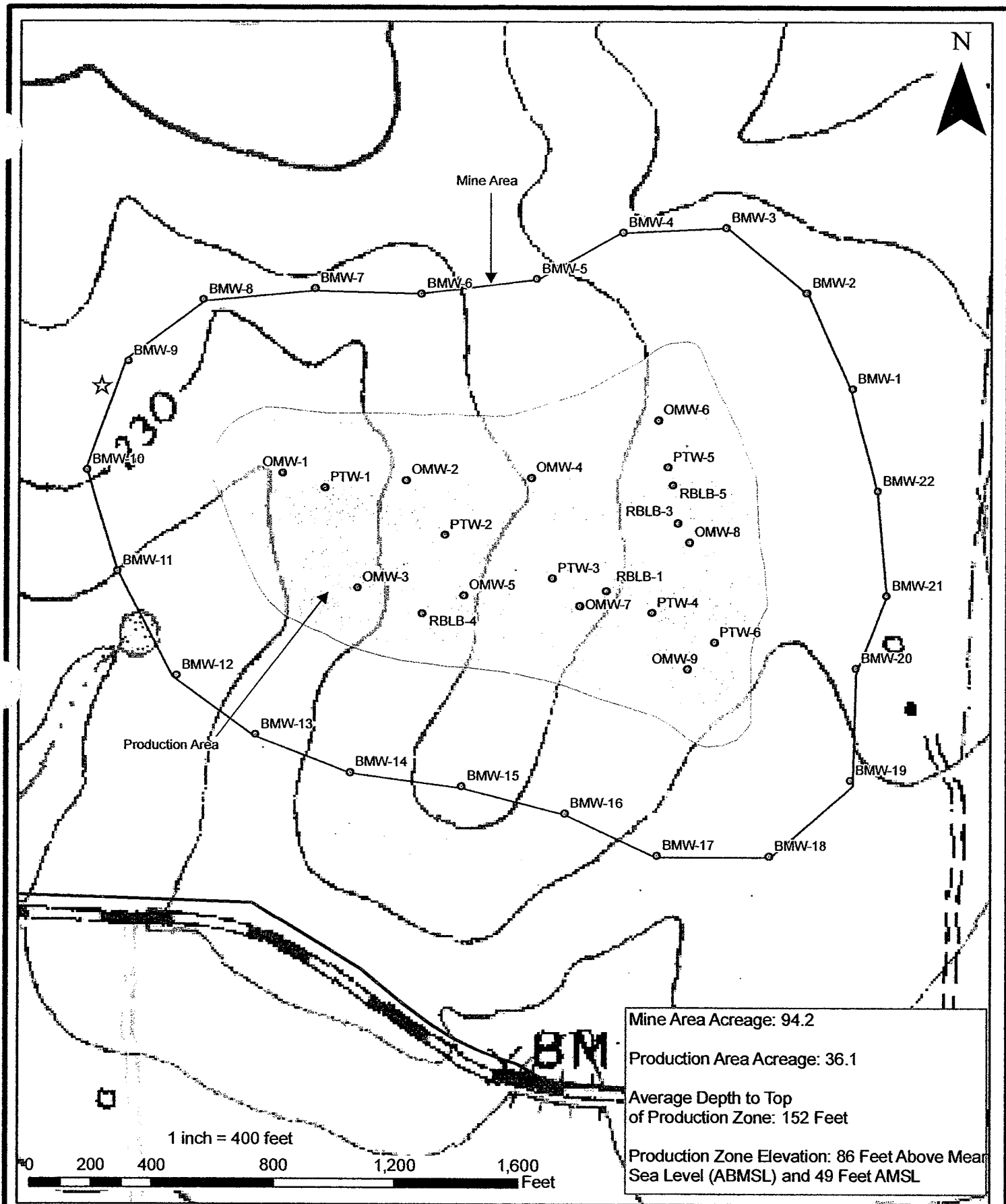
#### 4.1.1 Test Area

The PA-1 test area is shown in Figure 4-1. Figure 4-1 also shows the location of the various wells used in the test.

The pumping test wells (PTW) are completed in the Sand B which is the ore zone. This was the primary sand tested. The baseline monitoring wells (BMW) are the production zone baseline wells discussed above and are also completed in sand B. Overlying monitoring wells (OMW) are completed in Sand A which is located above Sand B and isolated from it by a confining clay/shale layer. The objective of monitoring Sand A was to confirm the presence of an effective geologic barrier to flow between the ore zone and any overlying aquifers. Regional baseline wells (RBL) are designated for each sand. Therefore, there are RBLA (Sand A) wells, RBLB (Sand B) wells, etc.

#### 4.1.2 Overview of the PA-1 Pumping Tests

Background water levels and barometric pressure were monitored from 17:00 hours on 7/8/2008 to 11:05 hours on 7/9/2008. Following this, two separate constant rate drawdown and recovery tests were performed at the PAA-1 location. A constant rate test stresses the aquifer through time and gives a good indication of how the aquifer will respond to long term pumping.



**Figure 4-1**

**Production Area Map**

• Baseline/Monitor Wells

Production Zone: 36.147 Acres

Mine Area Boundary: 94.155 Acres

USGS Topographic Map

☆ Proposed Plant Site



**Figure 4-1**

Drawn By: J.D.

Checked by: J.L. & C.H.

Date: August 25, 2008

The first test used PTW-6 as the pumping well. The pumping test began on 7/9/2008 at 11:05 hours and ended on 7/10/2008 at 20:28 hours for a total duration of 33.4 hours. The recovery was then monitored until 15:26 hours on 7/11/2008 for a duration of 18.96 hours. During the drawdown and recovery tests, barometric pressure was monitored and water level drawdown and recovery were monitored in various wells as discussed below.

The equipment was then moved and PTW-1 was used as the pumping well. The PTW-1 pumping test began on 7/12/2008 at 10:34 hours and ended on 7/13/2008 at 20:02 hours for a total duration of 33.43 hours. The recovery was then monitored until 8:36 hours on 7/15/2008 for duration of 36.56 hours. During the drawdown and recovery tests, barometric pressure was monitored and water level drawdown and recovery were monitored in several wells as discussed below.

#### 4.1.3 Data Acquisition and Equipment

Water level drawdown and recovery were recorded digitally and the data were downloaded to laptop computers for storage and analysis. In observation wells close to the pumping wells, water levels were recorded more frequently at the beginning of a drawdown or recovery phase. The sampling time increment was increased as the test progressed. This is because most of the water level change occurs early in the test. In the early parts of the test, water levels were recorded every 0.0273 minutes (1.64 seconds). After 5 minutes, water levels were recorded every 20 seconds. After 30 minutes, water levels were recorded every 2 minutes until the end of the test. Water levels in the baseline monitoring wells were recorded every 5 minutes because they were located farther away from the pumping well.

For the PTW-6 test, water levels in monitoring wells BMW-1 to BMW22, PTW-5, and OMW-8 and OMW-9 were monitored using In-Situ Inc. Troll units. In addition, an In-Situ Inc. Hermit unit was used to monitor the barometric pressure and the water levels in PTW-6, PTW-3, PTW-4, and RBLB-3.

Periodic manual water level measurements were made throughout the test with e-line measuring devices. These measurements were made to supplement the data and to verify that the transducers were performing adequately. In the PTW-6 test, water levels were measured manually in OMW-6 to OMW-9 and PTW-3 to 6. Manual measurements were also obtained in RBLB-1, RBLB-3, RBLB-5, and BMW-1 to 22. These manual readings were taken for quality assurance purposes to confirm the data logger measurements.

For the PTW-1 test, water levels were monitored in the following wells using In-Situ Inc. Troll units: BMW-1 to BMW22, PTW-3, RBLC-4, and OMW-2. An In-Situ Inc. Hermit unit was used to monitor the barometric pressure and the water levels in PTW-1, PTW-2, OMW-1, and RBLB-4. In the PTW-1 test, water levels were measured manually in OMW-1 to OMW-9 and wells PTW-1 to 3. Manual measurements were also obtained in RBLB-4, RBLC-3, RBLC-4, and BMW1 to 22. As in the first test, these manual readings were taken for quality assurance.

#### 4.1.4 Pumping Equipment

For both pumping tests, a 4 inch diameter 5 horsepower pump was used. The pump was set just above the screen interval in each well. The pump was capable of pumping approximately 40 gallons per minute (gpm) at the installed depth for each test.

#### 4.1.5 Well completions

Sand A and is in the depth range of approximately 50 to 120 feet below ground level and the OMW wells are completed within this interval. This is the only overlying sand above the production zone. Sand B wells are in the production zone. They are deeper, with typical completions in the 160 to 200 feet depth range. These wells include the pumping test wells and the production zone baseline monitoring wells.

A typical well in Sand A and B has a 9.875 inch reamed hole diameter with 5 inch inner diameter (ID) cemented casing. The completion consists of a 3 inch ID liner hung off the bottom of the casing with a section of screen. The upper part of the liner consists of a small section (approximately 2 to 7 feet) of steel blank pipe followed by a 20 feet section of 0.010 feet slotted screen.

## **4.2    Test Results**

### **4.2.1    Barometric Pressure Measurements**

Barometric pressure was measured during the entire PA-1 field test including both the PTW-6 and PTW-1 tests and a background measurement period prior to the PTW-6 test. Figure 4-2 shows the barometric pressure in pounds per square inch (psi) during the test. The barometric pressure was measured using an In-Situ Inc. barometer that was linked to the Hermit recording device.

From the data, the normal diurnal fluctuation in barometric pressure can be seen. Although there was a slight increase in barometric pressure early in PTW-6 test, the atmospheric pressure remained relatively constant thereafter. A weak low pressure system moved into the area just after the start of the PTW-1 pumping phase.

### **4.2.2    Background Water Level Measurements**

#### ***PTW-6 Test Background Water Level Measurements***

Prior to the start of the first test at PTW-6, background water levels were recorded at 5 minute intervals starting on 7/8/2008 at 17:00 hours and ending at 7/9/2008 at 11:05 hours. Background water levels were recorded in BMW wells 1 through 22, in PTW-5, and overlying Sand A monitoring wells OMW-8 and OMW-9. The change in the water level relative to the initial measurement is shown in Figure 4-3.



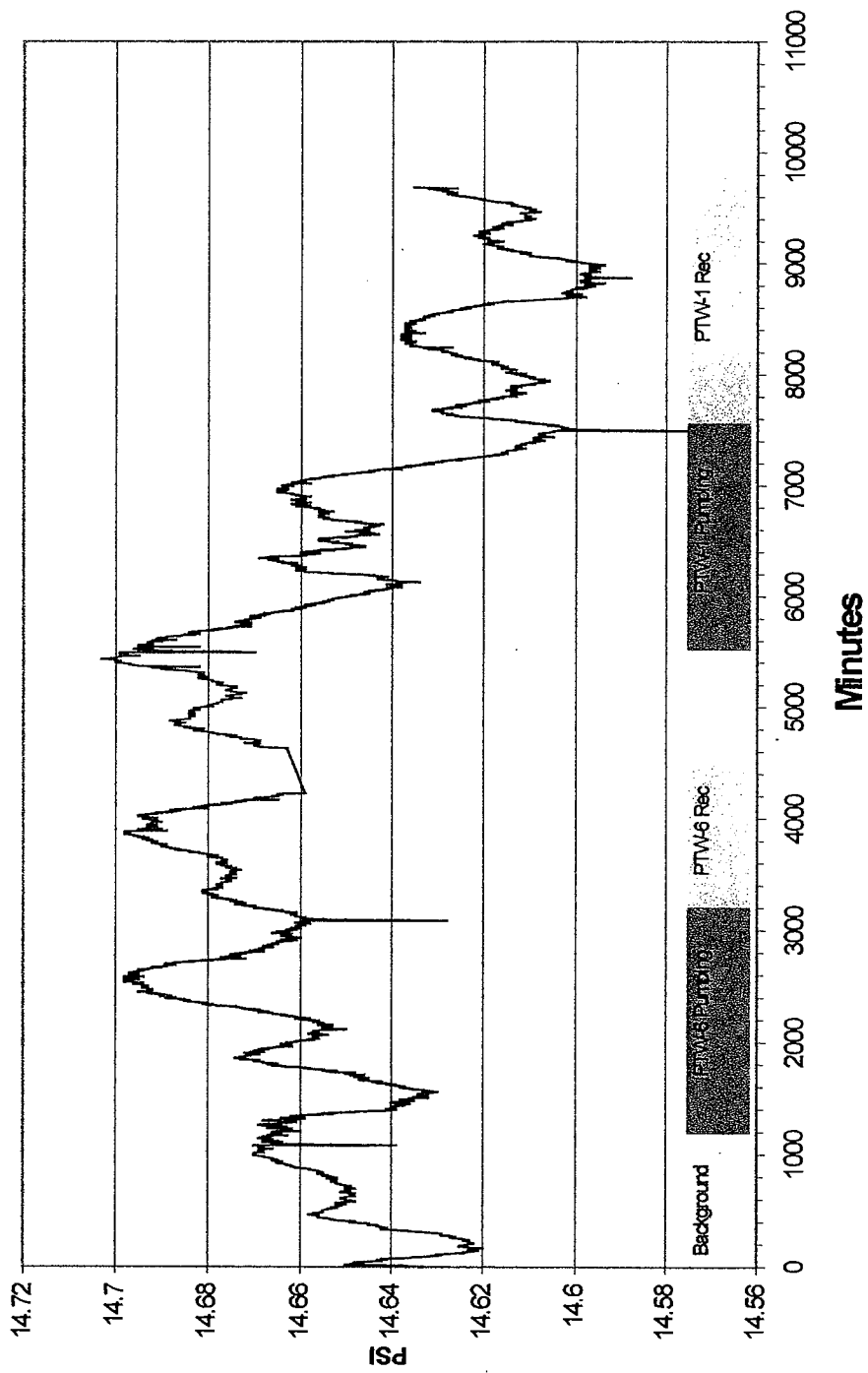


Figure 4.2 Barometric pressure during the PAA-1 pumping tests.

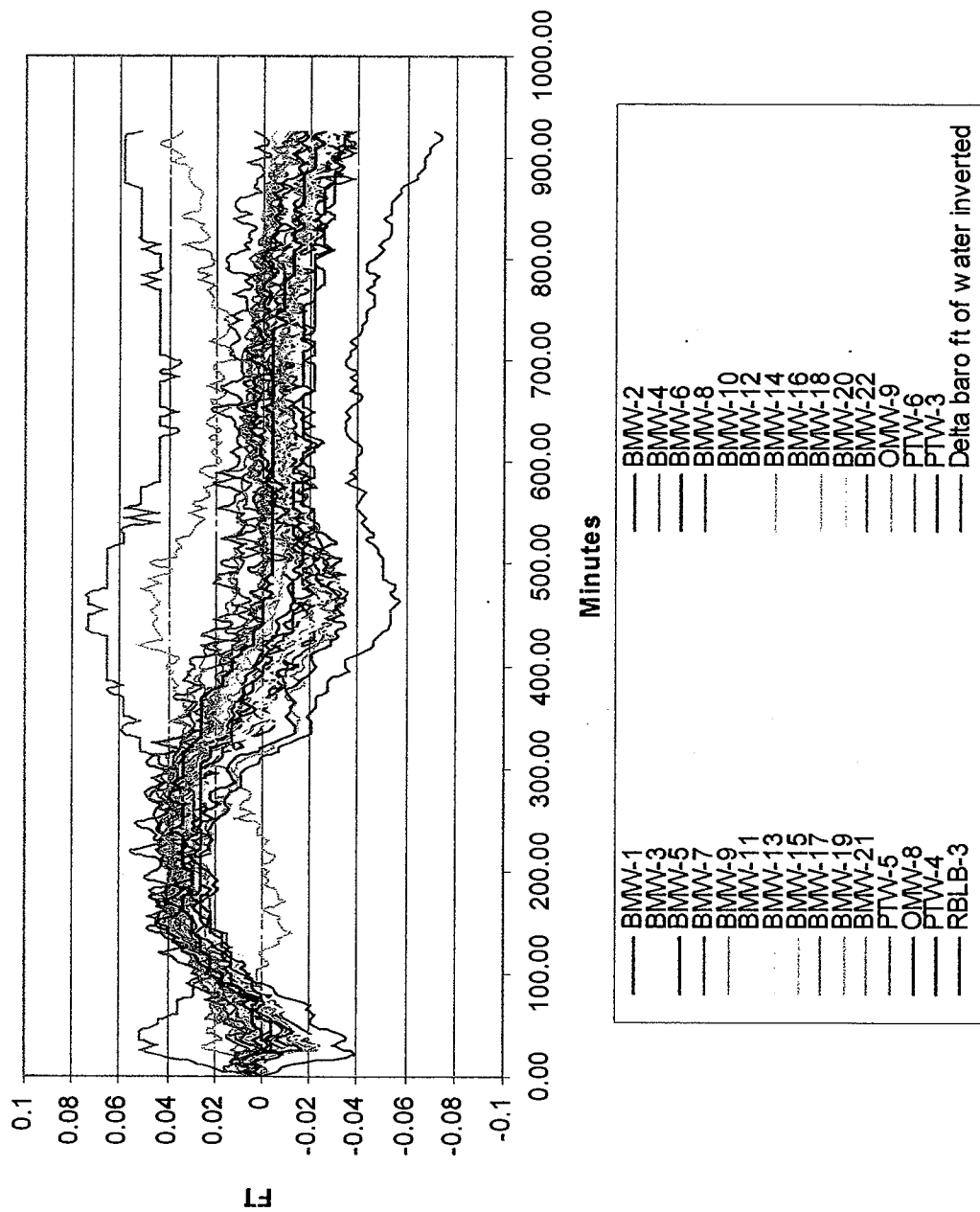


Figure 4.3. Background water level change (feet) and inverted barometric pressure change (converted to feet of water) monitored from 17:00 hours on 7/8/2008 to 11:05 hours on 7/9/2008.

From this figure, it can be concluded that there was a small but definite trend of water level decline in all but two of the wells over the 18 hour monitoring period. There was a small rise in water levels in BMW-3 and BMW-19. The maximum change in water levels was approximately 0.05 feet (0.6 inches) with most values in the 0.02 feet (0.24 inch) range. This small amount of change is considered to be negligible and to have an insignificant effect on the interpretation of the test results. The background water level changes are attributed to small changes in barometric pressure as discussed below.

#### ***PTW-1 Test Background Water Level Measurements***

Background water levels were also obtained prior to the PTW-1 pumping and recovery tests. This information was not used in the analysis that follows because water levels were perturbed due to the prior PTW-6 test and therefore, they may not be representative of true background conditions in the Sand B aquifer.

#### **4.2.3 Barometric Efficiency of the Sand B Aquifer**

Figure 4-3 also shows the inverted change in barometric pressure from the start of measurement as recorded prior to the PTW-6 test. The delta barometric pressure data were inverted and converted to feet of water for ease of comparison. The pressure data were inverted because of the opposite relationship that exists between water levels and barometric pressure in a confined aquifer. As the barometric pressure increases, water levels decline (and vice versa) in a well completed in a confined aquifer. The water level changes generally follow the pattern of the change in barometric pressure with no or only a very small time lag. There is not a one to one correspondence, however.

The barometric efficiency, BE, is the ratio of the water level change and the change in barometric pressure (Todd, 1980; Freeze and Cherry, 1979; Domenico and Schwartz, 1990):

$$BE = \Delta h (0.4335 \text{ psi/ft}) / \Delta P_{\text{atm}}$$

Where:

$\Delta h$  = change in water level (feet)

$\Delta P_{\text{atm}}$  = change in atmospheric pressure (psi)

BE = barometric efficiency (fraction)

0.4335 psi/ft = conversion factor

The barometric efficiency for Sand B was determined as follows. The background data in Figure 4-3 were analyzed and it was determined that the water levels in RBLB-3 were representative of the average water level change. The water level changes in RBLB-3 were plotted along with the inverted barometric pressure change (converted to water). A multiplicative factor representing the barometric efficiency was applied to the barometric data until a good match was obtained to the amplitude of the water level change in RBLB-3 (Figure 4-4). This methodology is commonly used as documented by Todd (1980) and Domenico and Schwartz (1990).

The barometric efficiency of the Sand B aquifer was determined to be 0.60. This means that 60% of the change in barometric pressure is recorded in the Sand B aquifer as an opposite water level response.

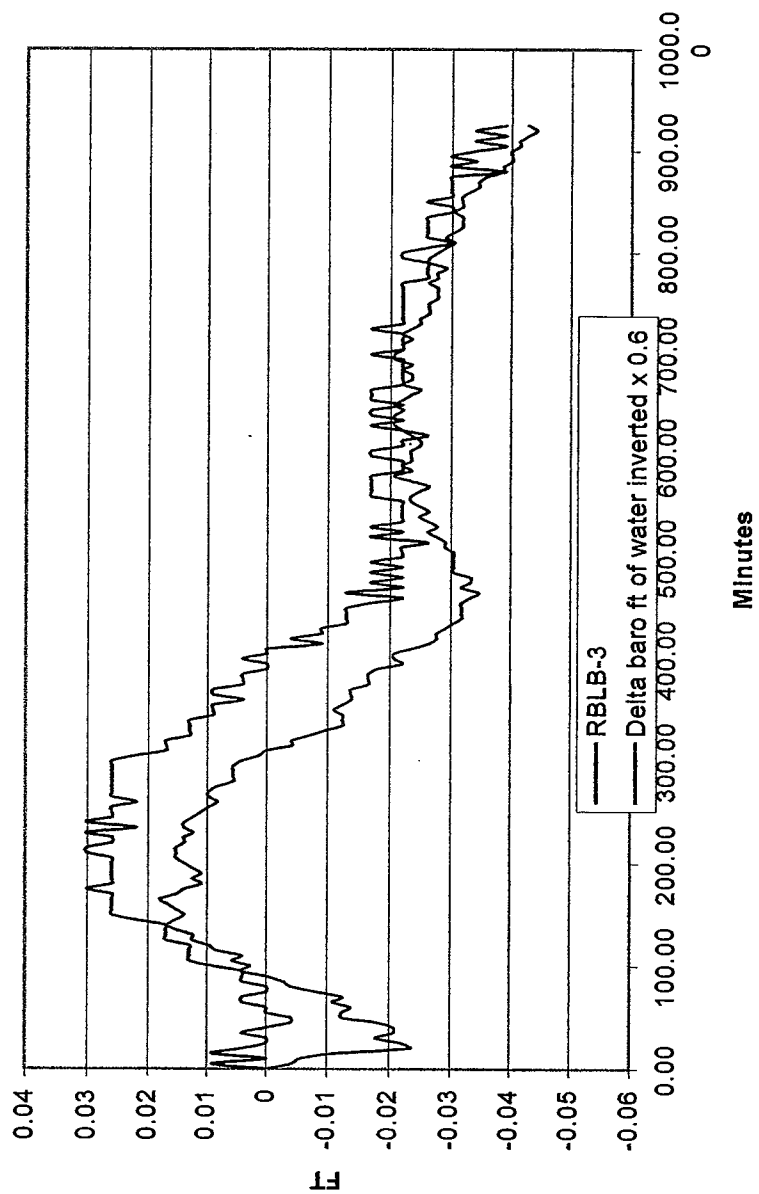


Figure 4.4 Determination of the barometric efficiency (BE) of the B sand aquifer using background water level change in well RBLB-3. The barometric pressure was inverted, converted to feet of water, and them multiplied by 0.6. The result shown here demonstrates that the amplitudes of the peaks are approximately equal when the BE is 0.60.

### ***PTW-6 Test Barometric Pressure Corrections***

Figure 4-5 shows the trend of the barometric pressure during the PTW-6 drawdown and recovery tests. A linear regression is provided with the line fit shown on the figure:

$$y = 1.0E-5x + 14.653 \text{ psi}$$

where  $y$  = barometric pressure, and  $x$  = elapsed time in minutes.

The overall trend shows a slight increase in barometric pressure over the time of the test. The increase is very small as evidenced by the slope of the line,  $1.0E-5$ . During the course of the test, the atmospheric pressure increase would cause a small increase in the water level drawdown and a small decrease in the water levels during recovery.

Using the BE of 0.6 derived above, this average trend was applied to the data. Over the course of the test, the corrected drawdown for a time  $x$  would be,

$$\text{Corrected drawdown} = \text{drawdown} + (\text{BE}) [(\text{Patm initial} - y) / 0.4335 \text{ psi/ft}]$$

The required corrections were found to be approximately 0.03 feet of water or less for the drawdown and recovery phases. This represents a maximum of 5 percent (and in most cases much less) of the measured water level change for the test. Therefore, no water level correction for barometric pressure changes was necessary for the PTW-6 test.

Barometric pressure during the PTW-6 drawdown and recovery tests

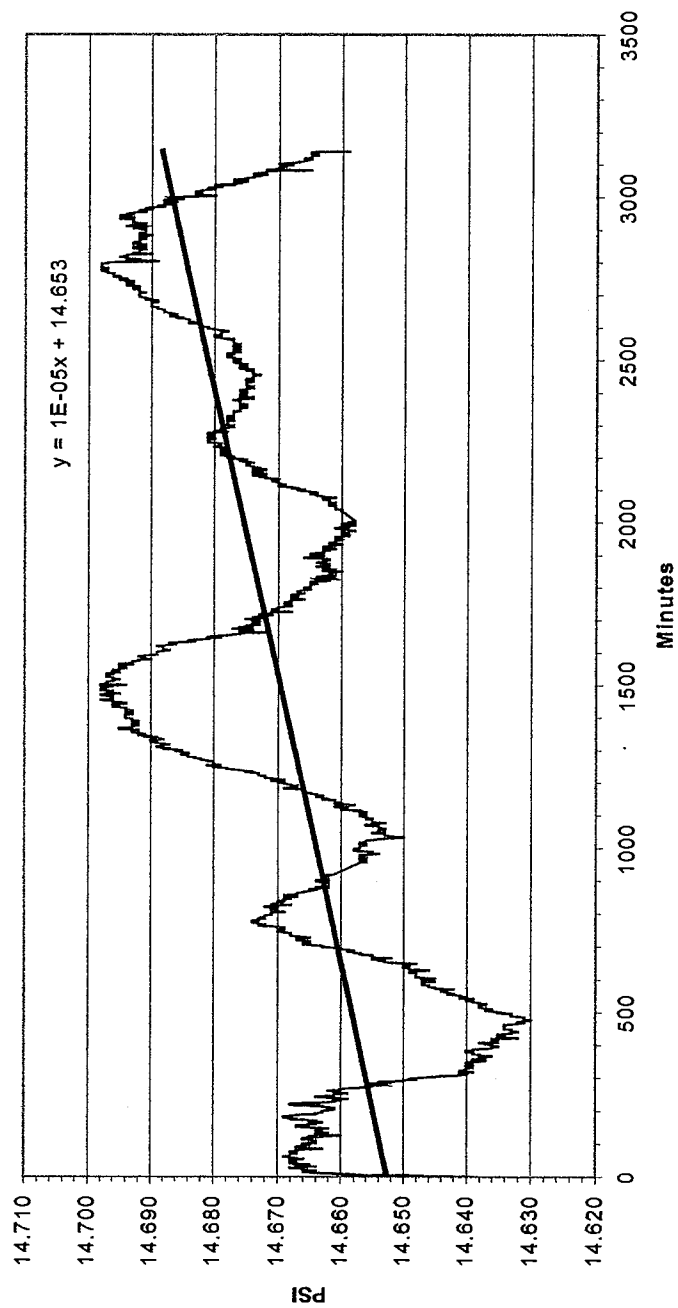


Figure 4.5. Barometric pressure trend during the PTW-6 pumping test.

### ***PTW-1 Test Barometric Pressure Corrections***

Figure 4-6 shows the trend of the barometric pressure during the PTW-1 drawdown and recovery tests. A linear regression is provided with the line fit shown on the figure:

$$y = -2.0E-5x + 14.67 \text{ psi}$$

where  $y$  = barometric pressure, and  $x$  = elapsed time in minutes.

The overall trend shows a decrease in barometric pressure over the time of the test. The increase is rather small as evidenced by the slope of the line,  $-2.0E-5$ . However, during the course of the test, the atmospheric pressure decrease would cause a decrease in the water level drawdown and an increase in the water levels during recovery.

Using the BE of 0.6 derived above, this average trend was applied to the data. Over the course of the test, the corrected drawdown for a time  $x$  would be,

$$\text{Corrected drawdown} = \text{drawdown} + (\text{BE}) [(\text{Patm initial} - y) / 0.4335 \text{ psi/ft}]$$

The required corrections were found to be approximately 0.06 to 0.10 feet of water for the drawdown and recovery phases. This represents a significant change (as much as approximately 20 percent) that required correction of the measured water levels during the test. The corrected drawdown and recovery data were then analyzed for aquifer properties.



Barometric pressure (psi) during the PTW-1 drawdown and recovery test

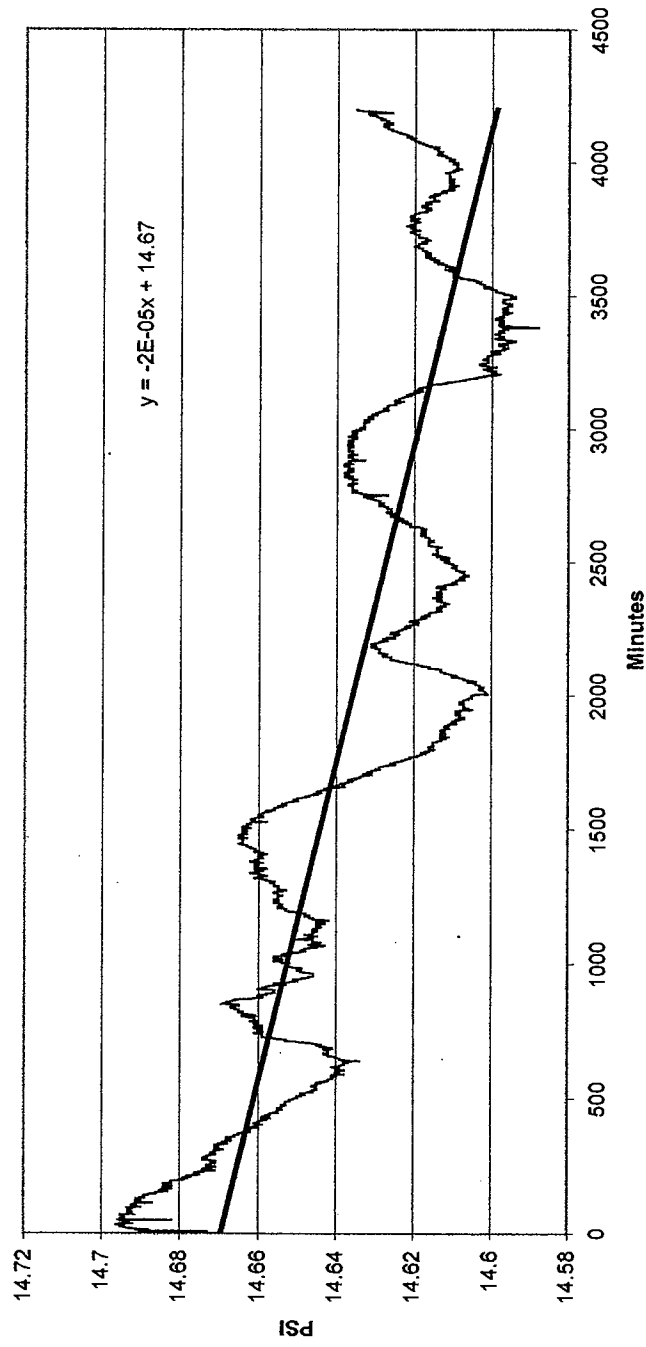


Figure 4.6. Barometric pressure trend during the PTW-6 pumping test.

#### 4.2.4 Pumping Rate

For the PTW-6 test, the rate was monitored frequently throughout the test to make sure that a constant rate was maintained. The average rate was relatively constant at 37.8 gpm. The total volume pumped was 75,821 gallons over the 33.4 hour pumping period.

For the PTW-1 test, the rate was monitored at frequent intervals, and the average rate was relatively constant at 36.7 gpm. The pumping duration was 33.43 hours. The total amount of water pumped was 73,562 gallons.

#### 4.2.5 Water Level Changes Resulting from Pumpage

##### *Water Level Changes in the PTW-6 Test*

Starting with the pre-test background period and ending with the recovery after the PTW-6 test, water levels were monitored and recorded continuously in digital form in all of the BMW wells using Level Troll data loggers. Levels in PTW-5, OMW-8, and OMW-9 were also recorded with Troll units. Water levels in PTW-6, PTW-4, PTW-3, and RBLB-3 were recorded digitally with the Hermit device.

The water level changes recorded with the Troll data loggers during the PTW-6 test are shown in Figure 4-7. Figure 4-8 shows the water level response in the pumping well and three nearby observation wells. Note that the vertical scale is logarithmic in Figure 4-8. Water levels were recorded more frequently at the beginning of the drawdown and the recovery portions and the sampling time increment was increased as the test progressed (see Section 4.1.3). As discussed in Section 4.1.3, manual water levels were also recorded primarily for quality assurance purposes. The actual analyses were performed on the continuously recorded digital data.

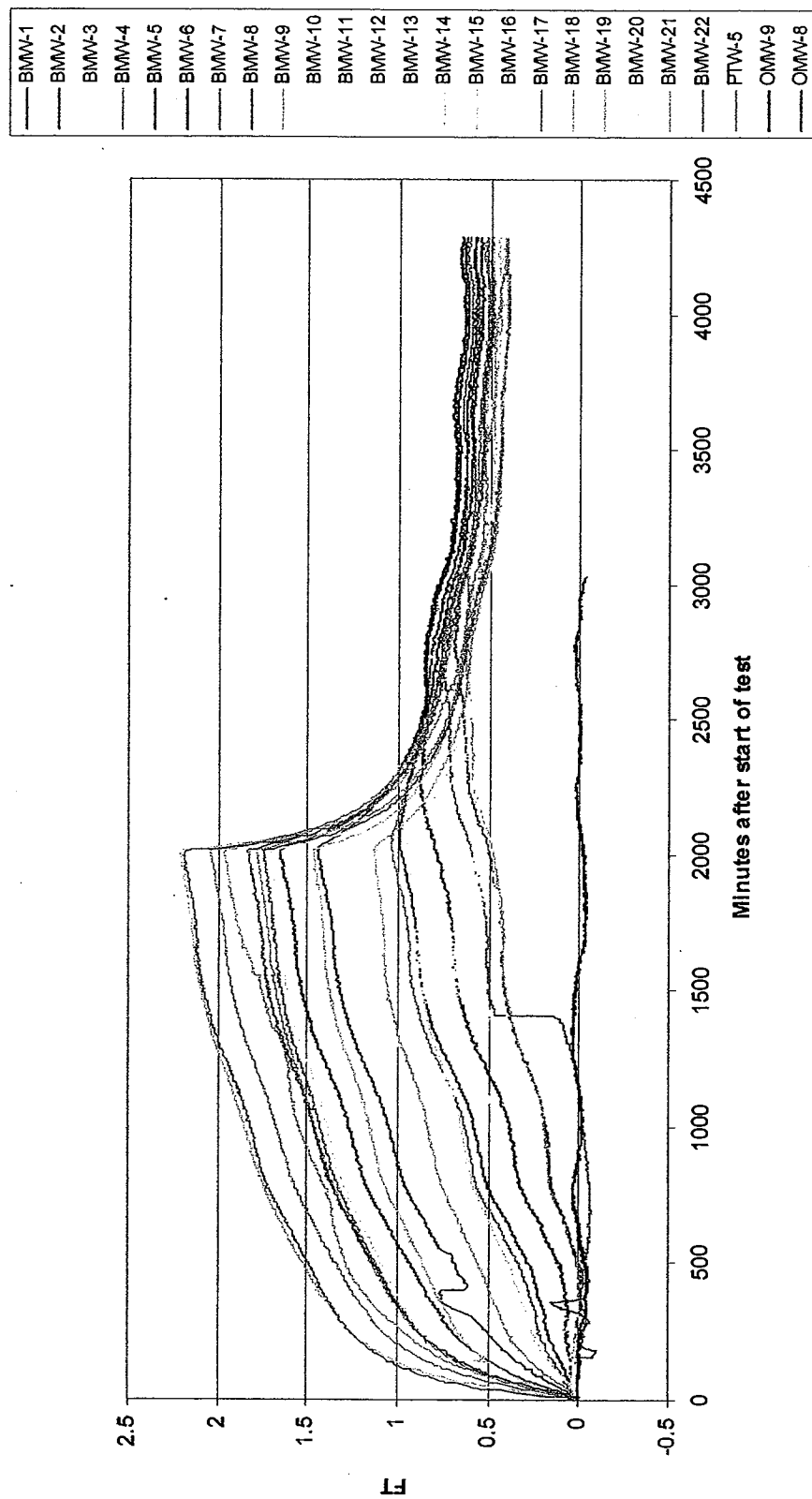


Figure 4.7. Water level drawdown and recovery in observation wells for the PTW-6 test.

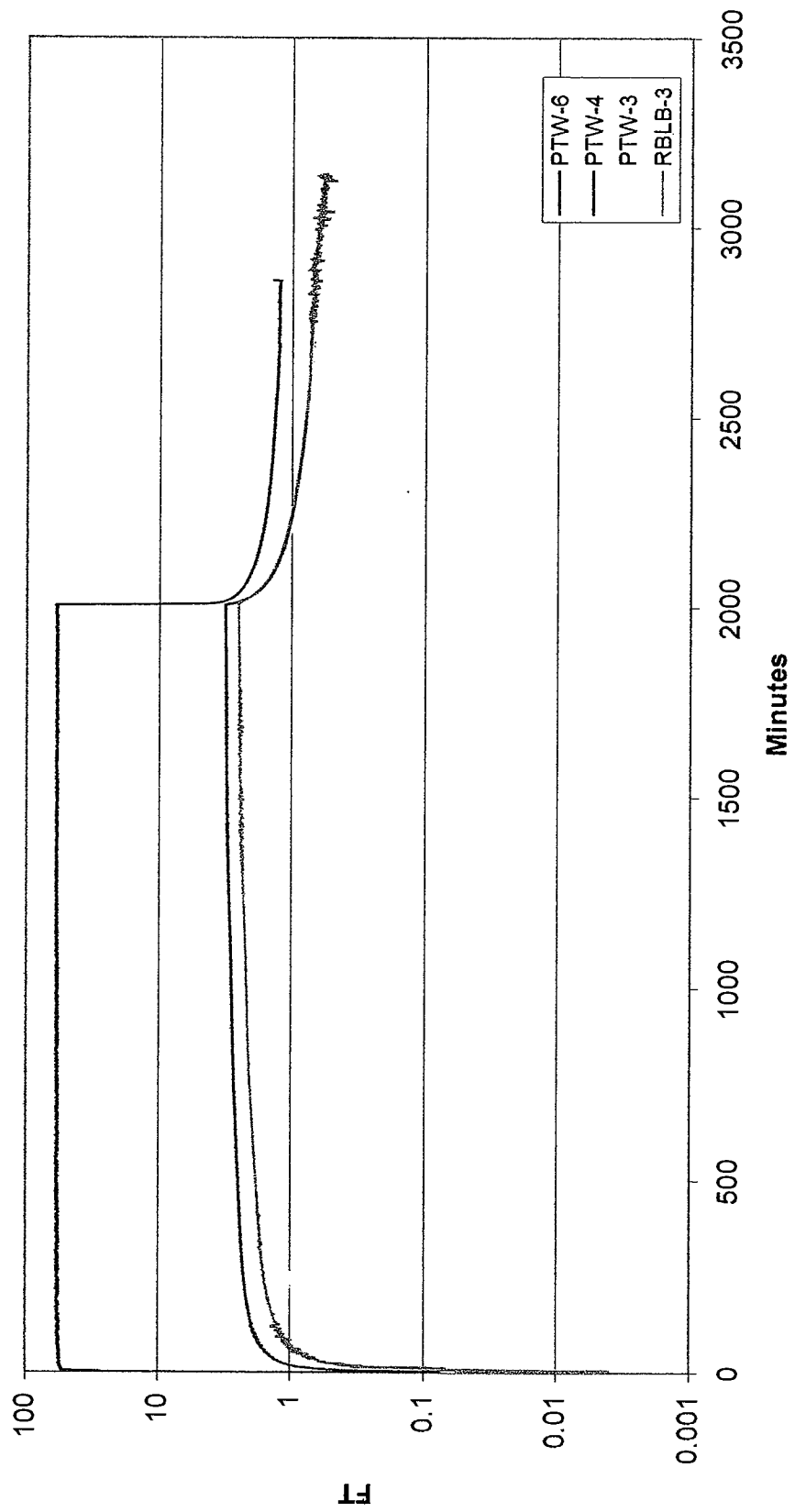


Figure 4.8. Water level drawdown and recovery from the Hermit data logger for the PTW-6 test.

From Figures 4-7 and 4-8, it can be seen that at least 0.6 feet of drawdown was recorded in all of the observation wells with drawdown as high as 2.2 feet in some of the wells. This amount of drawdown is considerably more than the amount of water level change that can be attributed to barometric pressure changes (Section 4.2.3). Note that the vertical scale is logarithmic in Figure 4.8.

The PTW-6 test digital logger data are given in Tables 4.1 and 4.2. The manual measurements are given in Table 4.3. These tables can be found in Appendix D.

#### ***Water Level Changes in the PTW-1 Test***

Starting with the pumping in PTW-1, water levels were monitored continuously in all of the BMW wells using Level Troll data loggers. Water levels were measured in all of the OMW wells during this phase of the PA-1 testing. OMW 1 to 9 measurements were made manually. OMW-2 measurements were obtained with the level troll transducer for the pre pumping test portion. OMW-1 water levels were recorded with the Hermit device. The water level changes during the PTW-1 test are shown in Figure 4-9 for the Troll data and Figure 4-10 for the Hermit data.

From Figures 4-9 and 4-10, it can be seen that at least 0.85 feet of drawdown was recorded in all of the observation wells with drawdown as high as approximately 1.85 feet in some of the wells. This amount of drawdown is considerably more than the amount of water level change that can be attributed to barometric pressure changes (Section 4.2.3).

The PTW-1 test digital logger data are given in Tables 4.4 and 4.5. The manual measurements are given in Table 4.6. These tables can be found in Appendix D.

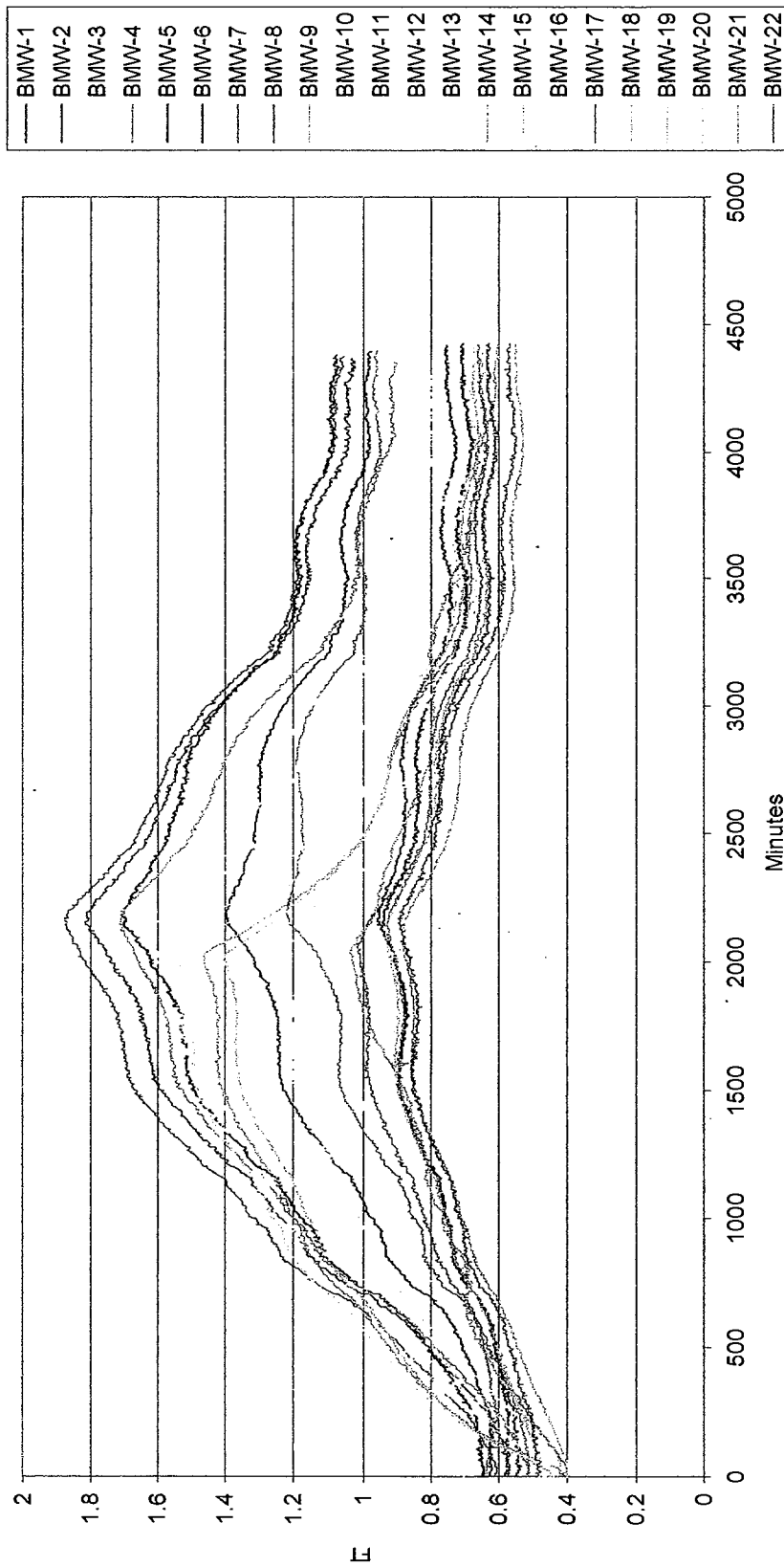


Figure 4.9. Water level drawdown and recovery from the Troll data loggers for the PTW-1 test.

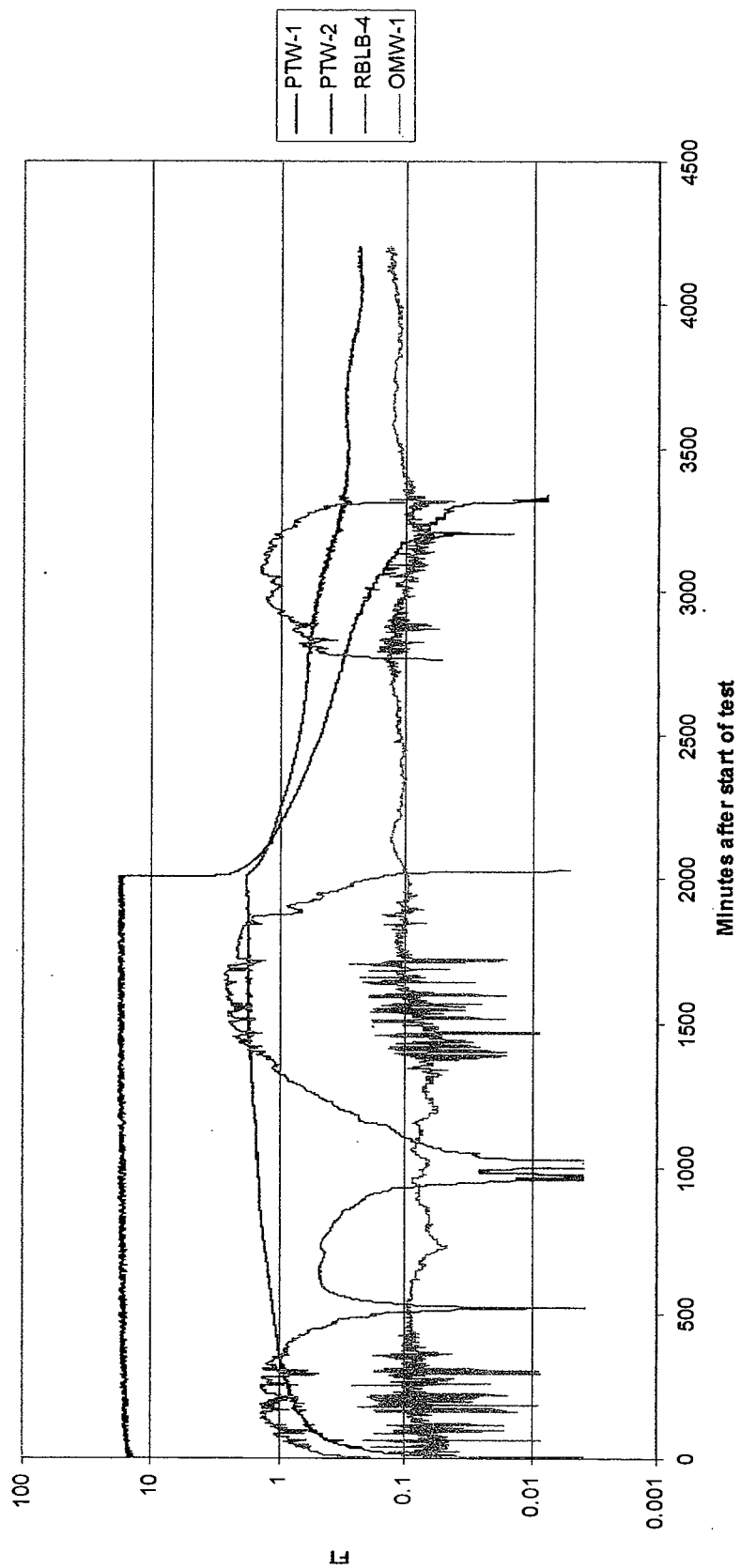


Figure 4.10. Water level drawdown and recovery from the Hermit data logger for the PTW-1 test.

#### 4.2.6 Hydraulic Communication between Pumped Wells and Observation Wells

The drawdown response to pumping is a measure of the amount of hydraulic communication between wells. Excellent communication between the pumped wells and the observations wells in the baseline monitoring well ring was observed in both tests. This means that the production zone baseline monitoring wells will communicate effectively with the PA-1 production area and therefore serve their intended function as monitor wells to protect water quality.

As discussed in the previous sections, the water level response to pumping was significantly greater than what could be attributed to barometric pressure changes. Also, as discussed below, the drawdown response in the monitoring ring wells was analyzable for aquifer parameters. This provides evidence that the observation well response to pumping is not simply the result of background fluctuations that could be caused by long term or seasonal water level fluctuations due to natural recharge or discharge. Furthermore, the water level changes are clearly induced by the pumpage at PTW-1 and PTW-6.

#### 4.2.7 Hydrologic Communication between Aquifers

The pumping tests in PTW-1 and PTW-6 demonstrate that there is no communication between the overlying Sand A aquifer and B sand aquifers. This is based on the water level response in the OMW series wells. Sand A is in the depth range of approximately 50 to 120 feet below ground level and the OMW wells are completed within this interval. Sand B wells are deeper, with typical completions in the 160 to 200 feet depth range.



In Figure 4-7, there is no discernable response in OMW-8 and OMW-9 to the pumping in PTW-6. The trace of the responses in OMW-8 and OMW-9 are superposed and fluctuate slightly around the 0 water level point. The response in the other wells to the pumpage is quite clear in Figure 4-7. Figure 4-10 shows that there was a very slight increase in water levels in OMW-1 during the PTW-1 test. If there were hydraulic communication between the pumped Sand B and Sand A, there would be an obvious decline in the water level of OMW-1.

Manual water level measurements in the OMW wells given in Tables 4.3 and 4.6 have a similar pattern. There is no detectable response in the overlying Sand A to the Sand B pumpage in either the PTW-1 or the PTW-6 test.

#### 4.2.8 Transmissivity and Storativity Calculations

The well tests were analyzed using Aqtesolv for Windows, Version 4.50 Professional (Duffield, 2007). This commercial program has been successfully and widely used for well test analysis since 1996.

The well test analyses are given in Appendix D for the PTW-6 and the PTW-1 tests. Each pumping and observation well is analyzed separately and there may be multiple analyses for a given well. A graph of the data with the line fit is given for each analysis. There are two phases for each test: water level drawdown during pumping, and water level recovery after the pumping well is shut-in. The goal of the analysis is to determine the transmissivity and storativity of the aquifer at each well location.

#### ***Well Test Analysis Methodology***

The PTW-6 and PTW-1 tests were analyzed using standard hydrologic methods. Three different standard methods were used to analyze the PTW-6 drawdown tests: Theis, Cooper-Jacob, and Dougherty Babu (PTW-6 only). Another standard method, the Theis recovery method, was used to analyze the recovery portion of the PTW-6 test.

Prior to the PTW-1 test analysis, the data were corrected for barometric pressure effects. Then, the Theis method with superposition was used to analyze the PTW-1 test drawdown and recovery results. This is because there was prior pumping in PTW-6. This prior pumping was incorporated into the analysis.

### ***Well Test Analysis Results***

The data were analyzable using the standard techniques described above. The expected Theis response was clearly displayed in the data. This means that the tests were properly conducted and that results can be used to characterize the Sand B aquifer.

The results are summarized in Table 4.7. The results between the two tests are similar. The transmissivity appears to be somewhat higher in the region near BMW-12 to BMW-22. The storativity is relatively constant. The analysis show that the transmissivity range is from approximately 377 to 1521 ft<sup>2</sup>/day. The storativity ranges from approximately 0.00001 to 0.001. The storativity was anomalously low in PTW-6 from the first test. This may be an artifact of perturbations in the data from the pumping well.

## **4.3 Hydrologic Boundaries and Recharge Areas**

### **4.3.1 Hydrologic Boundaries**

The recovery data from the PTW-1 pumping well may indicate the presence of a no flow boundary or an area of reduced transmissivity. As shown in Figure 4-11, there is a noticeable increase in the slope of the recovery data starting about 30 minutes after pumping stopped.

**Table 4.7 Summary of Well Test Analysis Results**

Pumped Well	Obs. Well	Solution Method	Transmissivity (ft <sup>2</sup> /day)	Storativity
PTW-6	BMW-1	Theis	1053.4	0.0001669
	BMW-1	Cooper-Jacob	1053.4	0.0001669
	BMW-1	Theis Recovery	1053.5	
PTW-6	BMW-2	Theis	882	0.000217
	BMW-2	Cooper-Jacob	882	0.000217
	BMW-2	Theis Recovery	891.8	
PTW-6	BMW-3	Theis	722.3	0.0002573
	BMW-3	Cooper-Jacob	729.6	0.0002101
	BMW-3	Theis Recovery	727.7	
PTW-6	BMW-4	Theis	777.1	0.0003618
	BMW-4	Cooper-Jacob	783.3	0.0003063
	BMW-4	Theis Recovery	779.4	
PTW-6	BMW-5	Theis	736.5	0.0003668
	BMW-5	Cooper-Jacob	736.5	0.0003668
	BMW-5	Theis Recovery	740.9	
PTW-6	BMW-6	Theis	513.4	0.0005047
	BMW-6	Cooper-Jacob	520.8	0.0003645
	BMW-6	Theis Recovery	520.8	
PTW-6	BMW-7	Theis	376.7	0.0005214
	BMW-7	Cooper-Jacob	403.5	0.0002696
	BMW-7	Theis Recovery	416.4	
PTW-6	BMW-8	Theis	472.6	0.0004203
	BMW-8	Cooper-Jacob	476.5	0.000225
	BMW-8	Theis Recovery	476.5	
PTW-6	BMW-9	Theis	554	0.000399
	BMW-9	Cooper-Jacob	572	0.0002623
	BMW-9	Theis Recovery	572	
PTW-6	BMW-10	Theis	673.4	0.0003995
	BMW-10	Cooper-Jacob	668.9	0.0002494
	BMW-10	Theis Recovery	659.2	
PTW-6	BMW-11	Theis	780.4	0.000382
	BMW-11	Cooper-Jacob	791.3	0.0002761
	BMW-11	Theis Recovery	791.3	
PTW-6	BMW-12	Theis	1194.2	0.0002472
	BMW-12	Cooper-Jacob	1194.2	0.0002472
	BMW-12	Theis Recovery	1194.2	
PTW-6	BMW-13	Theis	1126.3	0.0002531
	BMW-13	Cooper-Jacob	1126.3	0.0002531
	BMW-13	Theis Recovery	1175.3	
PTW-6	BMW-14	Theis	1206.6	0.0002315
	BMW-14	Cooper-Jacob	1206.6	0.0002315
	BMW-14	Theis Recovery	1206.6	
PTW-6	BMW-15	Theis	1196.7	0.0001925
	BMW-15	Cooper-Jacob	1020.6	0.000248
	BMW-15	Theis Recovery	1626.9	
PTW-6	BMW-16	Theis	1215.6	0.0001837
	BMW-16	Cooper-Jacob	1215.6	0.0001837
	BMW-16	Theis Recovery	1216	

(cont.) Table 4.7 Summary of Well Test Analysis Results

Pumped Well	Obs. Well	Solution Method	Transmissivity (ft <sup>2</sup> /day)	Storativity
PTW-6	BMW-17	Theis	1240.6	0.0001714
	BMW-17	Cooper-Jacob	1240.6	0.0001714
	BMW-17	Theis Recovery	1239.9	
PTW-6	BMW-18	Theis	1207.4	0.0001767
	BMW-18	Cooper-Jacob	1207.4	0.0001767
	BMW-18	Theis Recovery	1207.4	
PTW-6	BMW-19	Theis	1112.9	0.0002194
	BMW-19	Cooper-Jacob	1112.9	0.0002194
	BMW-19	Theis Recovery	1112.9	
PTW-6	BMW-20	Theis	1097.4	0.000226
	BMW-20	Cooper-Jacob	1097.4	0.000226
	BMW-20	Theis Recovery	1097.4	
PTW-6	BMW-21	Theis	1049.5	0.0002197
	BMW-21	Cooper-Jacob	1049.5	0.0002197
	BMW-21	Theis Recovery	1049.5	
PTW-6	BMW-22	Theis	1063.5	0.0002103
	BMW-22	Cooper-Jacob	1063.5	0.0002103
	BMW-22	Theis Recovery	1063.5	
PTW-6	PTW-5	Theis	1175.7	0.0001213
	PTW-5	Cooper-Jacob	1175.7	0.0001213
	PTW-5	Theis Recovery	1175.7	
PTW-6	PTW-3	Theis	1255.2	0.0001961
	PTW-3	Cooper-Jacob	1255.2	0.0001961
	PTW-3	Theis Recovery	1255.2	
PTW-6	PTW-4	Dougherty-Babu	1228	9.08E-05
	PTW-4	Cooper-Jacob	1228	9.08E-05
	PTW-4	Theis Recovery	1228	
PTW-6	PTW-6	Dougherty-Babu	465.9	3.40E-09
PTW-6	RBLB-3	Theis	1197	1.24E-04
	RBLB-3	Cooper-Jacob	1197	1.24E-04
	RBLB-3	Theis Recovery	1197	
PTW-1	BMW-1	Theis	871.4	0.0004195
PTW-1	BMW-2	Theis	626.5	0.0005141
PTW-1	BMW-3	Theis	494.7	0.0005108
PTW-1	BMW-4	Theis	451	0.0007146
PTW-1	BMW-5	Theis	466.6	0.0009361
PTW-1	BMW-6	Theis	433.8	0.001177
PTW-1	BMW-7	Theis	433.8	0.001177
PTW-1	BMW-8	Theis	449	0.0009529
PTW-1	BMW-9	Theis	515.4	0.0008619
PTW-1	BMW-10	Theis	587.1	0.0009388
PTW-1	BMW-11	Theis	657.4	0.0008451
PTW-1	BMW-12	Theis	780.7	0.0006553
PTW-1	BMW-13	Theis	876.8	0.0004959
PTW-1	BMW-14	Theis	928.2	0.0002818
PTW-1	BMW-15	Theis	900.4	0.0003862
PTW-1	BMW-16	Theis	921.8	0.0003425
PTW-1	BMW-17	Theis	1005.7	0.0003259
PTW-1	BMW-18	Theis	1006.5	0.0003237

**(cont.) Table 4.7 Summary of Well Test Analysis Results**

Pumped Well	Obs. Well	Solution Method	Transmissivity (ft <sup>2</sup> /day)	Storativity
PTW-1	BMW-19	Theis	784.8	0.0003064
PTW-1	BMW-20	Theis	851.5	0.0003619
PTW-1	BMW-21	Theis	796.4	0.0003743
PTW-1	BMW-22	Theis	824.7	0.0004284
PTW-1	PTW-2	Theis	1520.9	0.0004717
PTW-1	PTW-1	Cooper-Jacob	1100.5	9.23E-10

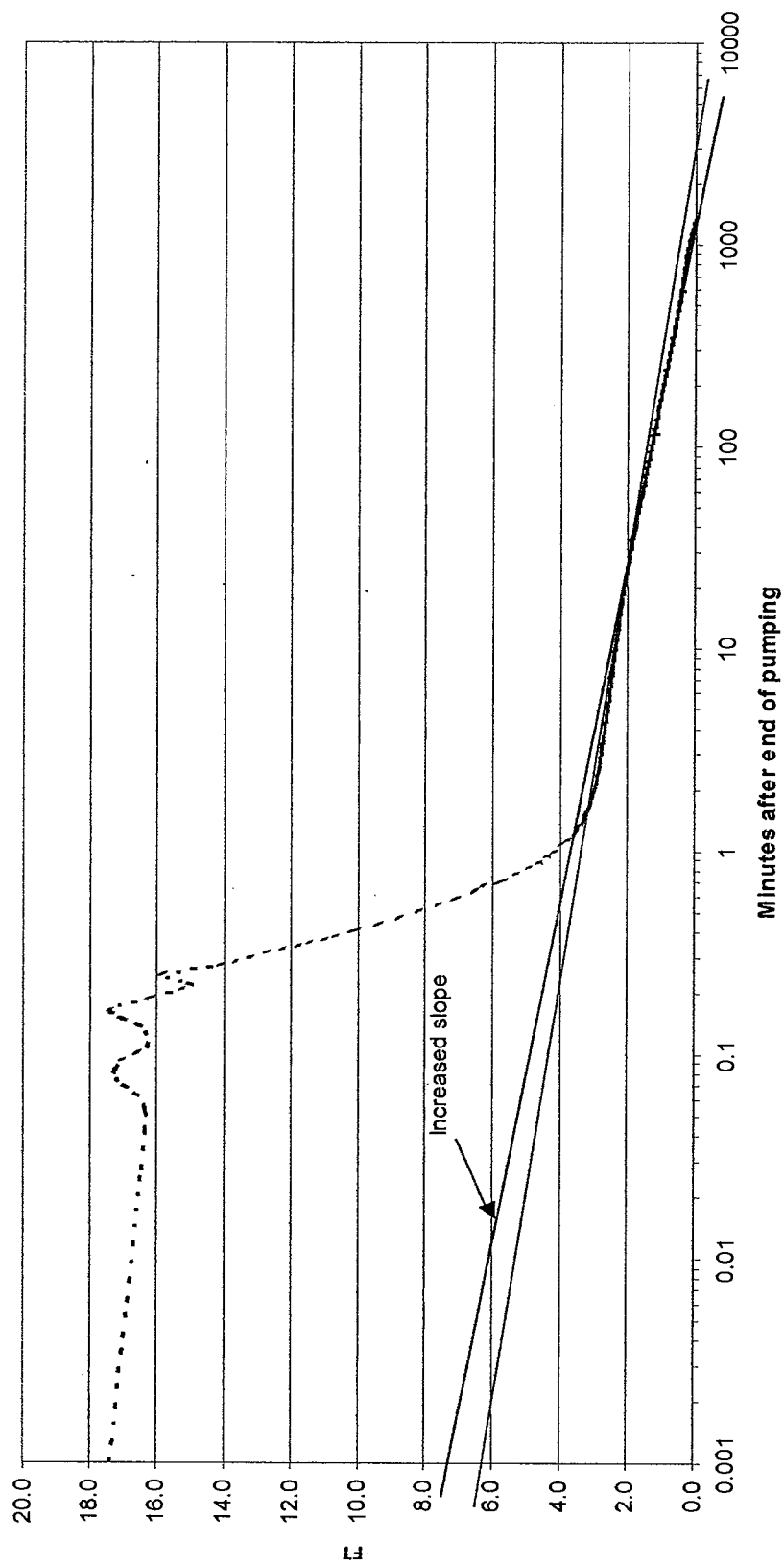


Figure 4.11. Data from the recovery test in PTW-1 shows an increase in the slope of the recovery after approximately thirty minutes. This may be an indication of a hydraulic boundary or a decrease in transmissivity.

#### 4.3.2 Recharge Boundaries and Recharge Areas

No indications of recharge boundaries were found in the test data. Recharge areas for the A and B sands are located in outcropping areas to the west of the proposed mine.

Recharge is by direct precipitation on the outcrop. No indication of any major regional recharge boundaries to the northwest where found in the pumping test data.

#### 4.4 Summary of Conclusions

The first goal of the test was to confirm that there is hydraulic communication between the monitoring well ring and the wells within the production zone sand (Sand B). This was clearly achieved in both tests. This indicates that the production zone monitor wells will be able to detect fluid movement from where uranium recovery is occurring (the production zone). Measures will be taken to prevent such an occurrence. During recovery operations, a net drawdown or “bleed” will be maintained in the ore zone by producing (i.e., removing) approximately 1% more water than the amount being injected. This means that there will be a hydraulic barrier to prevent fluid from moving out of the production zone. As an added measure of safety, water quality in the monitor wells must be monitored throughout the recovery and restoration phases of the operation.

The second goal was to analyze the pumping test results. This was done to characterize the aquifer and obtain data on the aquifer’s hydraulic characteristics such as transmissivity, storativity, and hydraulic conductivity. The data were of good quality and were analyzed using standard hydrologic techniques. The analysis show that the transmissivity range is from approximately 377 to 1521 ft<sup>2</sup>/day. The storativity ranges from approximately 0.00001 to 0.001. Finally, no communication was observed between Sand B and the overlying Sand A.

#### 4.5 References

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**5**

## 5.0 Groundwater Quality

### 5.1 First Overlying Aquifer (Sand A)

Table 5.1 lists water quality values for nine monitor wells completed in Sand A which is the first overlying aquifer above the production zone (Sand B). There are no other aquifers above Sand A. In addition to showing individual water quality values for 26 constituents, Table 5.1 provides summary statistics on high, low and averages values, and where applicable, the standard deviation is given.

For South Texas, water quality in Sand A is relatively good; however, it does not meet EPA Drinking Water Standards. Table 5.1 shows that values for Total Dissolved Solids (TDS) and Arsenic (As) are in excess the standards; the average value for TDS 904 mg/l and the average concentration for As is 0.018 mg/l. EPA Drinking Water Standards for these constituents are 500 mg/l and 0.010 mg/l, respectively. When comparing the 904 mg/l average TDS value to Texas' 1000 mg/l Standard, it is apparent that water quality for this parameter is near the higher end of this standard.

Although the average value for a particular constituent is an important measure of water quality, the presence and frequency of high values must also be considered in the evaluation. Referring back to Table 5.1, for example, it can be seen that 33% (every third well) of the wells have TDS values that exceed the 1000 mg/l Texas Standard. Although on average the water quality is within the Texas Standard for TDS, it is not uncommon for a well to have values that exceed this standard. When a standard is more stringent, the frequency of occurrences above the standard can be expected to increase, especially given the variability in groundwater. To illustrate, Table 5.1 shows that 100% of the wells have TDS values that are significantly higher than the EPA 500 mg/l level. Similarly, with the exception of one well (OMW-5), all of the wells have arsenic values in excess of the EPA Drinking Water Standard. Well OMW-5 has a value that is right at the 0.01 mg/l Drinking Water Standard and 33% of the wells have values that are at least twice the standard.

Examination of radium-226 values serves as another example of how a specific parameter can vary within a small portion of an aquifer. Radium-226 has a range from 0.5 pCi/l to 6.0 pCi/l – the high value is 12 times higher than the low value, and a Standard Deviation that is nearly 83% of the average.

**Table 5.1 Overlying Aquifer (Sand A) Water Quality**

	OMW-1	OMW-2	OMW-3	OMW-4	OMW-5	OMW-6	OMW-7
Ca	125	212	140	250	130	310	114
Mg	15.3	23.6	16.2	29.0	12.5	32.4	9.2
Na	105	120	91	118	95	133	83
K	2.6	2.1	1.9	2.3	1.8	2.6	1.8
CO3	0	0	0	0	0	0	0
HCO3	307	339	351	342	346	299	307
SO4	103	167	108	168	47	80	53
Cl	149	278	146	378	166	584	150
NO3-N	6.50	5.60	3.90	7.60	4.20	8.20	1.90
F	0.47	0.39	0.51	0.36	0.51	0.37	0.62
SIO2	16.1	18.7	18.4	21.4	18.8	20.3	17.6
TDS	673	1040	748	1180	663	1340	615
EC (umhos/cm)	1170	1690	1190	1940	1150	2450	1040
Alk as CaCO3	252	278	288	280	284	245	252
pH (Std. Unit)	7.35	7.21	7.31	7.23	7.30	6.98	7.39
As	0.021	0.018	0.013	0.019	0.010	0.026	0.014
Cd*	<0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001
Fe	<0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030
Pb*	0.002	< 0.002	< 0.002	< 0.002	0.003	< 0.002	< 0.002
Mn	0.007	0.003	< 0.003	0.008	< 0.003	0.011	0.006
Hg*	<0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004
Mo	0.024	< 0.010	< 0.010	< 0.010	< 0.010	0.013	< 0.010
Se	0.007	0.010	0.010	0.009	< 0.003	0.012	< 0.003
U	0.006	0.008	0.009	0.013	0.008	0.014	0.008
Ammonia-N*	<0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ra-226 (pCi/l)	0.5	0.9	0.8	6.0	3.6	2.0	0.8
Plus/Minus	0.1	0.1	0.1	0.2	0.2	0.1	0.1

All units are mg/l unless otherwise noted.

\*These elements do not occur naturally in the aquifer nor are they part of the process.

**Table 5.1 Overlying Aquifer (Sand A) Water Quality**

	OMW-8	OMW-9	High	Low	Average	Stdev	EPA Standard
Ca	170	208	310	114	184	62	NS
Mg	14.0	16.4	32.4	9.2	18.7	7.4	NS
Na	131	110	133	83	110	17	NS
K	2.3	2.1	2.6	1.8	2.2	0.3	NS
CO3	0	0	0	0	0	**	NS
HCO3	370	316	370	299	331	23	NS
SO4	86	79	168	47	99	41	250
Cl	244	296	584	146	266	136	250
NO3-N	4.00	5.40	8.20	1.90	5.26	1.88	10
F	0.47	0.36	0.62	0.36	0.45	0.08	4.0
SIO2	17.3	16.2	21.4	16.1	18.3	1.7	NS
TDS	955	925	1340	615	904	237	500
EC (umhos/cm)	1480	1570	2450	1040	1520	431	NS
Alk as CaCO3	303	259	303	245	271	19	NS
pH (Std. Unit)	7.19	7.24	7.39	6.98	7.24	0.11	6.5 to 8.5
As	0.031	0.012	0.031	0.010	0.018	0.007	0.010
Cd*	< 0.001	< 0.001	0.001	<0.001	0.001	**	0.005
Fe	< 0.030	< 0.030	<0.030	<0.030	<0.030	**	0.30
Pb*	< 0.002	< 0.002	0.003	<0.002	0.002	**	0.150
Mn	0.015	0.088	0.088	<0.003	0.016	0.026	0.050
Hg*	< 0.0004	< 0.0004	0.0004	<0.0004	0.0004	**	0.0020
Mo	< 0.010	< 0.010	0.024	<0.010	0.012	0.004	NS
Se	0.006	0.005	0.012	<0.003	0.007	0.003	0.050
U	0.009	0.007	0.014	0.006	0.009	0.003	0.030
Ammonia-N*	< 0.1	< 0.1	0.1	<0.1	<0.1	**	NS
Ra-226 (pCi/l)	4.8	1.4	6.0	0.5	2.3	1.9	5.0
Plus/Minus	0.2	0.1					

All units are mg/l unless otherwise noted.

\*These elements do not occur naturally in the aquifer nor are they part of the process.

\*\* No significant variance in range - standard deviation is not applicable.

NS: No standard.

One well (OMW-4) exceeds the EPA Drinking Water Standard of 5.0 pCi/l, and the values recorded in wells OMW-5 (3.6 pCi/l) and OMW-8 (4.8 pCi/l) are significantly above typical baseline levels of <1.0 pCi/l. The 2.3 pCi/l average value for radium-226 matches the average value from 47 area wells that were sampled in the baseline water well inventory in late 2006. Although the averages are the same, it should be remembered that the completion zones for many of the area wells are not known. Without knowing the completion zones, a direct comparison cannot be made.

To summarize, Sand A water quality does not meet EPA's Primary Drinking Water Standards for TDS and arsenic. Elevated arsenic levels in the Gulf Coast Aquifer, including sites in Goliad County, are acknowledged in the 2008 State of Texas Water Quality Inventory Groundwater assessment (March 19, 2008). Page 105 of the study states, "As with the Ogallala aquifer, the Gulf Coast aquifer shares some concern over the presence of arsenic." Figure 8 (page 107) from the study shows that sites in northern and southern Goliad County have arsenic levels in excess of the 1.0 mg/l EPA Primary Drinking Water Standard.

The 5.26 mg/l average nitrate level is somewhat elevated compared to many areas of Texas but it is within EPA's 10 mg/l Primary Drinking Water Standard. Nitrate levels at or in excess of the 10 mg/l standard were reported in six wells during the 2006 water well inventory. Elevated nitrate levels are also noted for areas within the Gulf Coast Aquifer in the 2008 State of Texas Water Quality Inventory Groundwater assessment (March 19, 2008). With regard to EPA Secondary Drinking Water Standards, the average chloride value of 266 mg/l slightly exceeds the 250 mg/l standard.

In the upcoming section discussing one of the more strongly mineralized portions of the aquifer, Sand B Production Zone, it will be shown that there is a pronounced difference in water quality between Sand A and Sand B. In view of the conclusions given in Chapter 3.0 Production Area Geology and Hydrology and Chapter 4.0 Hydrologic Testing, it is not surprising to find distinct water quality differences between the two sands. Hydrologic testing verified that the substantial clay/shale confining layers described in the geology chapter effectively isolate the two sands from each other - without these effective barriers, the two sands would have similar water quality.

Evaluation of the deeper subsurface geology shows significant confining layers between the base of Sand C and the top of Sand D. As demonstrated in the Mine Permit Application, Sand D too is adequately confined at its top and base with clay/shale layers.

## 5.2 Production Zone (Sand B)

For the purposes of hydrologic testing and baseline characterization, 17 wells were completed in Production Zone Sand B. To date, 10 of the wells have been sampled and the analyses are discussed herein. As noted earlier, UEC plans to sample the other 7 wells in early September. UEC has requested TCEQ to observe the upcoming sampling event and to collect split samples from any of the existing baseline wells. Upon receiving the laboratory results on the additional 7 wells and completing its quality assurance/quality control review, UEC will supplement the production zone baseline water quality section of this Application with the expanded database. Results from this additional sampling effort are expected by early October.

The locations of the 10 wells within the Production Area are shown on the previously referenced Figure 1-4 Production Area Map. The wells labeled PTW-1 through PTW-6 and RBLB-1, 3, 4, and 5 are completed in Sand B. As can be seen from the map, the wells are distributed in a pattern that provides coverage throughout the production area. Covering the area in this manner not only provided a better basis for characterizing the water quality, it also provided a wider array of well locations for hydrologic testing (well pumping).

Water quality analyses for the 36-acre Production Area are presented in Table 5.2. A review of the table shows that the water quality fails to meet EPA Primary Drinking Water Standards; TDS, and more importantly uranium and radium-226, are in excess of the standards. Although the average TDS value of 624 mg/l exceeds EPA's 500 mg/l by approximately 120 mg/l, it is the presence of uranium and radium-226 that sets this water far apart from water that is deemed acceptable for human consumption. Because this 36 acre portion of the aquifer contains natural uranium mineralization, elevated levels of uranium and radium-226 are to be expected; it is the presence of these elements, and to a lesser extent several other constituents which are discussed below, that make Sand B quite different from overlying Sand A.

**Table 5.2 Production Zone (Sand B) Water Quality**

	PTW-1	PTW-2	PTW-3	PTW-4	PTW-5	PTW-6
Ca	87	90	110	109	104	106
Mg	11.3	10.9	17.5	15.1	15.9	16.5
Na	117	110	100	106	98	102
K	3.3	4.7	2.7	4.5	2.5	2.8
CO3	0	0	0	0	0	0
HCO3	322	251	346	338	360	344
SO4	47	61	45	50	11	38
Cl	165	166	166	166	166	167
NO3-N	< 0.01	0.02	0.02	0.05	< 0.01	< 0.01
F	0.79	0.67	0.65	0.62	0.57	0.57
SIO2	12.1	13.5	14.5	14.3	13.6	14.2
TDS	593	620	640	638	623	620
EC (umhos/cm)	1000	1020	1120	1120	1070	1110
Alk as CaCO3	264	206	284	277	295	282
pH (Std. Unit)	7.32	7.55	7.35	7.37	7.32	7.30
As	0.008	0.010	0.007	0.009	0.002	< 0.002
Cd*	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fe	0.031	0.017	0.063	0.005	< 0.030	< 0.030
Pb*	< 0.002	< 0.002	< 0.002	< 0.002	0.002	0.004
Mn	0.012	0.006	0.025	0.015	0.008	0.013
Hg*	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004
Mo	0.136	0.070	< 0.010	< 0.043	< 0.010	< 0.010
Se	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
U	0.032	0.009	0.009	0.059	0.005	0.010
Ammonia-N	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ra-226 (pCi/l)	17.0	17.0	38.0	196.0	357.0	202.0
Plus/Minus	1.0	1.0	1.0	1.0	2.0	1.0

All units are mg/l unless otherwise noted.

\*These elements do not occur naturally in the aquifer nor are they part of the process.

**Table 5.2 Production Zone (Sand B) Water Quality**

	RBLB-1	RBLB-3	RBLB-4	RBLB-5	High	Low	Average	STDEV
Ca	100	91	101	88	110	87	99	8
Mg	19.0	15.8	20.2	16.5	20.2	10.9	15.9	2.8
Na	98	95	100	94	117	94	102	7
K	6.6	8.9	7.1	4.4	8.9	2.5	4.7	2.0
CO3	ND	ND	ND	ND	0	0	0	**
HCO3	332	302	325	340	360	251	326	29
SO4	82	41	69	9	82	9	45	22
Cl	161	163	150	163	167	150	163	5
NO3-N	ND	0.05	ND	ND	0.05	0.01	0.02	0.02
F	0.70	0.70	0.70	0.80	0.80	0.57	0.68	0.08
SIO2	32.2	31.6	32.0	31.6	32.2	12.1	21.0	8.9
TDS	644	614	666	584	666	584	624	23
EC (umhos/cm)	1160	1070	1140	1050	1160	1000	1086	50
Alk as CaCO3	272	253	266	279	295	206	268	23
pH (Std. Unit)	7.43	7.79	7.54	7.63	7.79	7.30	7.46	0.15
As	0.006	0.030	0.004	0.009	0.030	<0.002	0.009	0.008
Cd*	ND	ND	ND	ND	<0.001	<0.001	<0.001	**
Fe	ND	ND	ND	ND	0.060	ND	0.029	0.025
Pb*	ND	ND	ND	ND	0.004	<0.002	0.002	**
Mn	0.020	0.020	ND	0.020	0.025	0.006	0.015	0.006
Hg*	ND	ND	ND	ND	<0.0004	<0.0004	<0.0004	**
Mo	ND	ND	ND	ND	0.136	<0.010	0.047	0.046
Se	0.001	0.002	0.001	0.001	0.003	0.001	0.002	**
U	0.062	0.080	0.006	0.060	0.080	0.005	0.033	0.028
Ammonia-N	ND	ND	0.08	0.06	<0.1	<0.1	<0.1	**
Ra-226 (pCi/l)	393.0	111.0	37.2	1090.0	1090.0	17.0	245.8	309.9
Plus/Minus	5.7	3.9	2.1	9.6				

All unit are mg/l unless otherwise noted.

\*These elements do not occur naturally in the aquifer nor are they a part of the process.

\*\*Not calculated - range is insignificant.



Of the 10 Production Zone Sand B wells, 50% have uranium concentrations in excess of the Drinking Water Standard of 0.030 mg/l. With regard to radium-226, 100% of the wells are in excess of the 5 pCi/l standard. The lowest radium-226 values (17 pCi/l) in the Mine Area are from wells PTW-1 and PTW-2. The other 8 wells have values that far exceed the 5 pCi/l standard. As shown in the table, values range from 37 pCi/l to 1,090 pCi/l. The average radium-226 concentration is 246 pCi/l, which is nearly 50 times higher than the EPA Primary Drinking Water Standard. The lowest radium-226 value of 17 pCi/l is almost 3.5 times higher than the drinking water standard and the high value of 1,090 exceeds the drinking water standard by 218 times. Although not as far ranging or high, uranium values exceed the drinking water standard in every other well, and the average for all 10 wells (0.033 mg/l) is just over the standard.

In summary, the Sand B aquifer does not meet EPA Primary Drinking Water Standards. Moreover, because of its high radium-226 content, water from this zone would not be suitable for long-term irrigated agriculture. Watering of livestock from this zone should also be avoided, especially since much higher quality water is locally present throughout the non-mineralized portions of the aquifer.

### 5.3 Mine Area (Sand B Perimeter Monitor Wells)

Referring back again to the previously cited Figure 1-4 Production Area Map, the Production Zone Monitor Ring can be seen in relation to the 36-acre Production Area. The area encompassed by the monitor well ring is approximately 94 acres. All 22 wells were sampled and analyzed for the same 26 water quality constituents given in the tables for Sand A Non-production Zone and Sand B Production Zone. Not unexpectedly, the subsequent discussion will show that baseline water quality in the Mine Area is more similar to that in the Production Area. Since the Mine Area wells (i.e., those in the Production Zone Monitor Well Ring) are completed in Sand B, water quality should be quite similar; however, the levels of uranium and radium-226 should not be as high as they are in the Production Area.

Table 5.3 summarizes the water quality values for the 22 production zone monitor wells. It is immediately obvious from the table that the water quality in the Mine Area also fails to meet EPA Primary Drinking Water Standards. Unlike Sand B Production Zone, the Mine Area meets the drinking water standard for uranium; however, it does not meet the 5 pCi/l drinking water standard for radium-226.

**Table 5.3 Baseline Monitor Wells (Production Zone)**

	BMW-1	BMW-2	BMW-3	BMW-4	BMW-5
Ca	88	82	105	110	105
Mg	19.5	17.2	18.1	17.4	16.6
Na	104	101	93	98	99
K	3.14	3.39	4.98	3.17	4.03
CO <sub>3</sub>	0	0	0	0	0
HCO <sub>3</sub>	350	338	317	320	318
SO <sub>4</sub>	26	15	61	55	57
Cl	169	158	165	166	162
NO <sub>3</sub> -N	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
F	0.60	0.60	0.60	0.55	0.60
SiO <sub>2</sub>	16.1	14.8	13.9	13.8	13.2
TDS	620	575	643	640	638
EC (umhos/cm)	1100	1040	1090	1100	1090
Alk as CaCO <sub>3</sub>	287	277	260	262	261
pH (Std. Unit)	7.43	7.46	7.38	7.35	7.44
As	0.006	0.007	0.005	< 0.002	< 0.002
Cd*	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fe	0.196	0.061	< 0.030	< 0.030	0.035
Pb*	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Mn	0.022	0.012	0.009	0.009	0.009
Hg*	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004
Mo	< 0.010	< 0.010	0.011	< 0.010	< 0.010
Se	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
U	0.013	0.017	0.009	0.006	0.015
Ammonia-N*	< 0.1	0.2	< 0.1	< 0.1	< 0.1
Ra-226 (pCi/l)	28.0	27.0	9.8	29.0	41.0
Plus/Minus	1.0	1.0	0.3	1.0	1.0

All units are mg/l unless otherwise noted.

\*These elements do not occur naturally in the aquifer nor are they part of the process.

**Table 5.3 Baseline Monitor Wells (Production Zone)**

	BMW-6	BMW-7	BMW-8	BMW-9	BMW-10
Ca	105	101	103	108	96
Mg	16.90	14.50	15.50	15.40	14.60
Na	99	100	104	105	103
K	3.16	3.34	3.81	2.92	3.28
CO3	0	0	0	0	0
HCO3	310	294	304	321	309
SO4	57	53	50	48	47
Cl	165	166	164	172	160
NO3-N	< 0.01	< 0.01	< 0.01	0.01	< 0.01
F	0.60	0.60	0.60	0.62	0.60
SIO2	13.3	13.2	12.3	13.0	15.3
TDS	640	653	658	680	610
EC (umhos/cm)	1090	1060	1070	1100	1050
Alk as CaCO3	254	241	249	263	253
pH (Std. Unit)	7.34	7.40	7.42	7.42	7.88
As	0.002	0.002	< 0.002	< 0.002	0.004
Cd*	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fe	< 0.030	< 0.03	0.036	< 0.030	0.016
Pb*	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Mn	0.009	0.007	0.009	0.032	0.007
Hg*	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004
Mo	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Se	0.004	< 0.003	< 0.003	< 0.003	< 0.003
U	0.002	0.004	0.003	0.188	< 0.001
Ammonia-N*	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ra-226 (pCi/l)	2.9	1.8	1.7	1.8	1.5
Plus/Minus	0.1	0.1	0.1	0.1	0.1

All units are mg/l unless otherwise noted.

\*These elements do not occur naturally in the aquifer nor are they part of the process.

**Table 5.3 Baseline Monitor Wells (Production Zone)**

	BMW-11	BMW-12	BMW-13	BMW-14	BMW-15
Ca	95	99	95	99	99
Mg	17.20	17.90	18.90	18.50	18.00
Na	106	106	109	105	106
K	3.75	3.29	4.66	3.33	3.34
CO3	0	0	0	0	0
HCO3	316	306	321	333	332
SO4	63	89	70	73	73
Cl	168	168	165	158	162
NO3-N	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
F	0.57	0.55	0.51	0.60	0.57
SIO2	15.8	15.8	17.9	17.4	18.0
TDS	678	698	658	645	705
EC (umhos/cm)	1110	1140	1130	1130	1130
Alk as CaCO3	259	251	273	272	272
pH (Std. Unit)	8.18	7.89	7.95	7.84	7.85
As	0.007	0.007	0.011	0.008	0.006
Cd*	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fe	< 0.030	0.050	< 0.030	< 0.030	< 0.030
Pb*	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Mn	0.012	0.033	0.018	0.021	0.021
Hg*	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004
Mo	< 0.010	< 0.010	0.014	< 0.010	< 0.010
Se	< 0.003	< 0.003	< 0.003	0.006	< 0.003
U	0.001	0.008	0.031	0.001	0.001
Ammonia-N*	0.2	< 0.1	< 0.1	< 0.1	< 0.1
Ra-226 (pCi/l)	1.7	4.9	2.4	1.5	0.9
Plus/Minus	0.1	0.2	0.2	0.1	0.1

All units are mg/l unless otherwise noted.

\*These elements do not occur naturally in the aquifer nor are they part of the process.

**Table 5.3 Baseline Monitor Wells (Production Zone)**

	BMW-16	BMW-17	BMW-18	BMW-19	BMW-20
Ca	82	95	88	95	90
Mg	16.60	17.40	17.90	18.20	18.00
Na	115	116	120	108	106
K	4.69	3.38	5.13	4.42	3.31
CO3	0	0	0	0	0
HCO3	301	346	325	320	314
SO4	56	55	56	62	64
Cl	169	164	170	172	163
NO3-N	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
F	0.52	0.60	0.55	0.53	0.65
SIO2	16.2	18.1	18.1	17.9	17.0
TDS	643	685	658	655	635
EC (umhos/cm)	1090	1140	1130	1130	1100
Alk as CaCO3	247	284	266	262	257
pH (Std. Unit)	8.05	7.49	7.46	7.50	7.50
As	0.008	0.006	0.004	0.006	0.069
Cd*	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fe	< 0.030	< 0.030	< 0.030	< 0.030	0.037
Pb*	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Mn	0.015	0.026	0.010	0.012	0.050
Hg*	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004
Mo	0.035	< 0.010	< 0.010	0.012	0.481
Se	< 0.003	< 0.003	< 0.003	0.003	< 0.003
U	0.007	0.002	0.005	0.008	0.057
Ammonia-N*	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ra-226 (pCi/l)	1.9	1.5	1.8	8.1	40.0
Plus/Minus	0.1	0.1	0.1	0.3	1.0

All units are mg/l unless otherwise noted.

\*These elements do not occur naturally in the aquifer nor are they part of the process.

**Table 5.3 Baseline Monitor Wells (Production Zone)**

	BMW-21	BMW-22
Ca	95	96
Mg	19.60	20.00
Na	107	104
K	4.00	4.80
CO3	0	0
HCO3	317	312
SO4	63	75
Cl	166	168
NO3-N	< 0.01	< 0.01
F	0.62	0.57
SIO2	17.7	17.1
TDS	650	668
EC (umhos/cm)	1120	1140
Alk as CaCO3	260	256
pH (Std. Unit)	7.28	7.30
As	0.009	0.007
Cd*	< 0.001	< 0.001
Fe	0.063	< 0.030
Pb*	< 0.002	< 0.002
Mn	0.019	0.011
Hg*	< 0.0004	< 0.0004
Mo	0.048	< 0.010
Se	0.004	< 0.003
U	0.029	0.030
Ammonia-N*	< 0.1	< 0.1
Ra-226 (pCi/l)	34.0	22.0
Plus/Minus	1.0	1.0

All units are mg/l unless otherwise noted.

\*These elements do not occur naturally in the aquifer nor are they part of the process.

**Table 5.3 Baseline Monitor Wells (Production Zone)**

	High	Low	Average	STDEV	EPA Standard
Ca	110	82	97	8	NS
Mg	20.0	14.5	17.5	1.5	NS
Na	120	93	105	6	NS
K	5.13	2.92	3.79	0.67	NS
CO3	0	0	0	**	NS
HCO3	350	294	319	14	NS
SO4	89	15	58	15	<b>250</b>
Cl	172	158	165	4	<b>250</b>
NO3-N	0.01	<0.01	0.01	**	<b>10</b>
F	0.65	0.51	0.58	0.03	<b>4.0</b>
SIO2	18.1	12.3	15.7	1.9	NS
TDS	705	575	652	28	<b>500</b>
EC (umhos/cm)	1140	1040	1104	29	NS
Alk as CaCO3	287	241	262	11	NS
pH (Std. Unit)	8.18	7.28	7.58	0.26	<b>6.5 to 8.5</b>
As	0.069	<0.002	0.008	0.013	<b>0.010</b>
Cd*	<0.001	<0.001	0.001	**	<b>0.005</b>
Fe	0.196	0.030	0.043	0.036	<b>0.300</b>
Pb*	<0.002	<0.002	0.002	**	<b>0.150</b>
Mn	0.050	0.007	0.017	0.010	<b>0.050</b>
Hg*	<0.0004	0.0004	<0.0004	**	<b>0.0020</b>
Mo	0.481	<0.01	0.035	0.098	NS
Se	0.006	<0.003	0.003	0.001	<b>0.050</b>
U	0.188	<0.001	0.020	0.039	<b>0.030</b>
Ammonia-N*	0.2	<0.1	0.1	0.03	NS
Ra-226 (pCi/l)	41.0	0.90	12.1	14.0	<b>0.05</b>
Plus/Minus					

All units are mg/l unless otherwise noted.

\*These elements do not occur naturally in the aquifer nor are they part of the process.

\*\* No significant variance in range - standard deviation is not applicable.

NS: No standard.

Mine Area water quality also falls short of meeting EPA's Primary Drinking Water Standard for TDS. The average TDS value for the Mine Area is 652 mg/l and the EPA standard is 500 mg/l. The lowest TDS value of 575 mg/l occurred in a single well (BMW-2).

It was previously mentioned that for certain parameters water quality can vary noticeably within an aquifer, and the range of variability for a constituent can be significant over a relatively short distance. A comparison of radium-226 values from the Production Zone with those in the Mine Area provides a good illustration of this point. The average radium-226 level in the monitor well ring is 20 times lower than in the Production Area. The monitor well ring average is 12 pCi/l compared to 246 pCi/l in the Production Area which is only 400 feet from the ring. Although radium-226 is considerably lower at a distance of 400 feet from the Production Area, many of the monitor wells have significantly elevated levels. Table 5.3 shows that approximately 45% of the monitor wells have radium-226 in excess of the drinking water standard. Eighteen percent of the wells exceed the 0.03 mg/l drinking water standard for uranium, and one of the monitor wells (MW-9) is more than 6 times higher than the standard. Again, because the monitor well ring is located very near a delineated ore zone, values such as those listed in the tables are to be expected.

#### 5.4 Water Quality Comparisons

Now that water quality information has been presented for all three zones, a single summary table has been prepared to allow an overall one-page comparison.

At the risk of being repetitive, the water quality comparisons given in Table 5.4 clearly show the significant variability in groundwater from the same aquifer. With the exception of considerably higher radium-226 levels in Production Area, water quality in the Production Area is quite similar to that in the Mine Area. Since wells from these areas are completed in the Production Zone Sand B, similarity can be expected. The main difference between the two areas is that commercial quantities of recoverable uranium are concentrated in the Production Area. However, as discussed above, significant portions of the Production Zone Monitor Well Ring (Mine Area), also have uranium mineralization but the main ore body lies approximately 400 feet inside the ring.



**Table 5.4 Water Quality Comparisons (Sand A Non-Production Zone, Production Area Sand B and Production Zone Mine Area**

	<b>Overlying Sand A Average</b>	<b>Production Area Average</b>	<b>Production Zone Mine Area Average</b>
Ca	184	99	97
Mg	18.7	15.9	17.5
Na	110	102	105
K	2.2	4.7	3.79
CO3	0	0	0
HCO3	331	326	319
SO4	99	45	58
Cl	266	163	165
NO3-N	5.26	0.02	0.01
F	0.45	0.68	0.58
SIO2	18.3	21.0	15.7
TDS	904	624	652
EC (umhos/cm)	1520	1086	1104
Alk as CaCO3	271	268	262
pH (Std. Unit)	7.24	7.46	7.58
As	0.018	0.009	0.008
Cd*	0.001	<0.001	0.001
Fe	<0.030	0.029	0.043
Pb*	0.002	0.002	0.002
Mn	0.020	0.015	0.017
Hg*	0.0004	<0.0004	<0.0004
Mo	0.012	0.047	0.035
Se	0.007	0.002	0.003
U	0.009	0.033	0.020
Ammonia-N*	<0.1	<0.1	0.1
Ra-226 (pCi/l)	2.3	245.8	12.1

All units are mg/l unless otherwise noted.

\*These elements do not occur naturally in the aquifer nor are they part of the process.

Clearly the biggest water quality difference shown on Table 5.4 is between the Overlying Non-production Sand A and the two areas within Production Zone Sand B (Production Area and Mine Area). Major differences can be seen in 9 of the water quality indicators listed below.

Sand A, the shallowest of the aquifers, has significant levels of nitrate compared to Sand B. The precipitous decline in nitrate levels from Sand A to the lower Sand B is yet another example of the hydraulic separation that exists between the two sands. Significant differences in chloride and TDS are additional indicators of the isolation between the two zones. At the PA-1 location in the proposed permit area, Sand A does not have strong uranium mineralization, and this is another indication that the sands are effectively isolated from one another. Because of their isolation, differences certain water quality constituents are expected.

Lastly, it should be remembered from earlier discussions in this chapter that Sand A fails to meet EPA Primary Drinking Water Standards for two non-radiological constituents: TDS and arsenic. Unlike Sand A, Production Sand B fails to meet the drinking water standards for one non-radiological parameter (TDS) and two radiological parameters: radium-226 and uranium.

	Sand A Non- Production Zone	Sand B Production Area	Sand B Mine Area
Calcium (mg/l)	184	99	97
Sulfate (mg/l)	99	45	58
Chloride 9mg/l)	266	163	165
Nitrate (mg/l)	5.26	0.02	0.01
TDS* (mg/l)	904	624	652
Arsenic (mg/l)	0.018	0.009	0.008
Molybdenum (mg/l)	0.012	0.047	0.035
Uranium (mg/l)	0.009	0.033	0.020
Radium-226 (pCi/l)	2.3	246	12

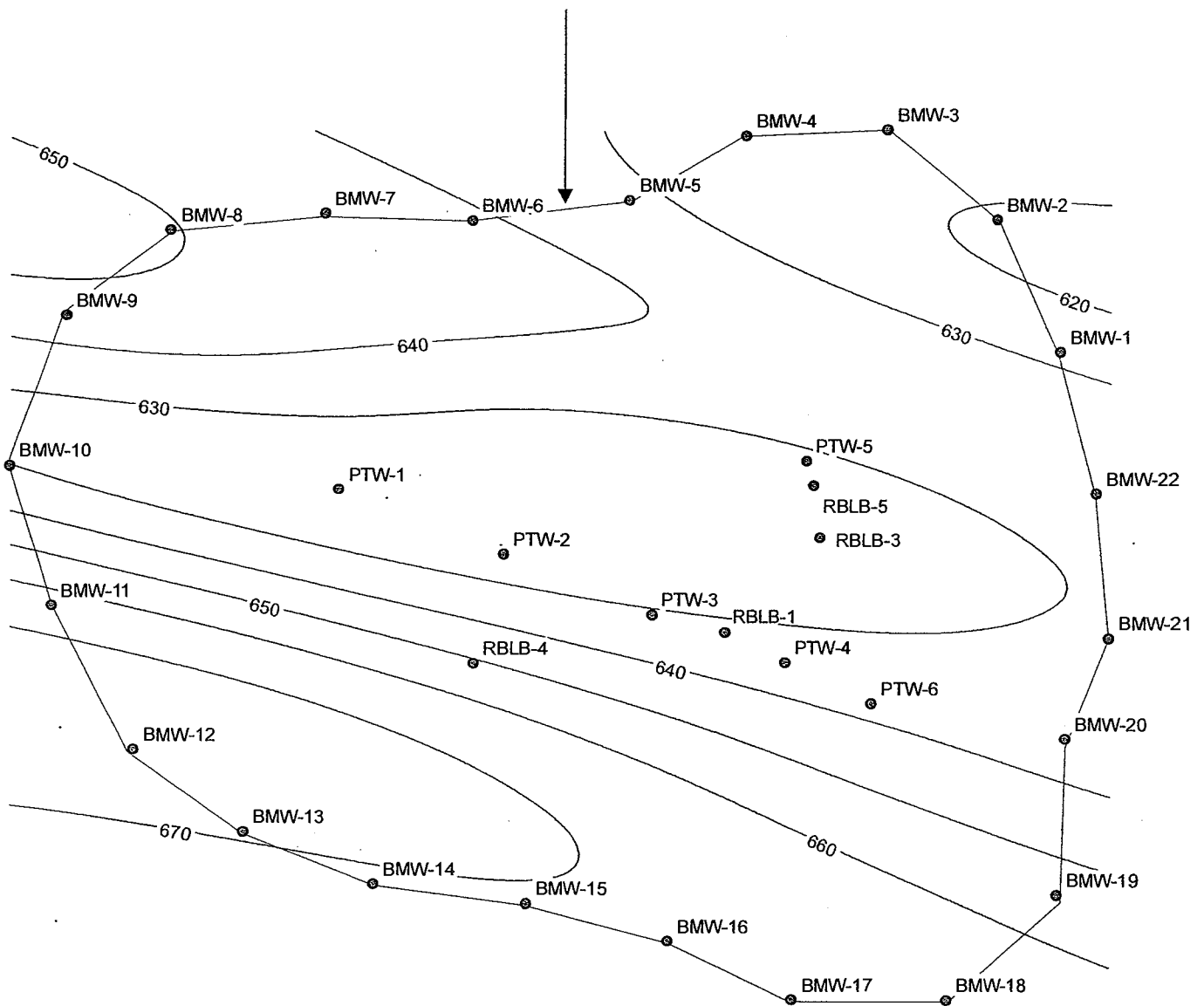
\*Total Dissolved Solids.

Up to this point the discussion has focused on the number and location of wells sampled, water quality differences, comparisons with drinking water standards, production area and mine area size, etc. Although all of these important and interesting topics are required elements of the PAA Application, additional information on water levels and TDS variability across the proposed Production Area must also be included in the Application. To that end, four maps are included herein: (1) Production Zone TDS Contours Map; (2) Non-production Zone TDS Contour Map; (3) Production Zone Piezometric Map; and (4) Non-production Zone Piezometric Map.

Figure 5-1 Production Zone TDS Contour Map was constructed using TDS from the 22 monitor wells and the 10 interior production zone wells. TDS values from the nine overlying Sand A wells were used in making Figure 5-2 Non-production Zone TDS Contour Map. Similarly, the piezometric maps were made from water level measurements taken from the baseline wells when hydrologic testing was performed in June and July of this year.



Mine Area



1 inch = 400 feet

0 200 400 800 1,200 1,600 Feet

**Figure 5-1**

**Production Zone TDS  
Contour Map (Sand B)**

— Contours mg/L • Baseline/Monitor Wells

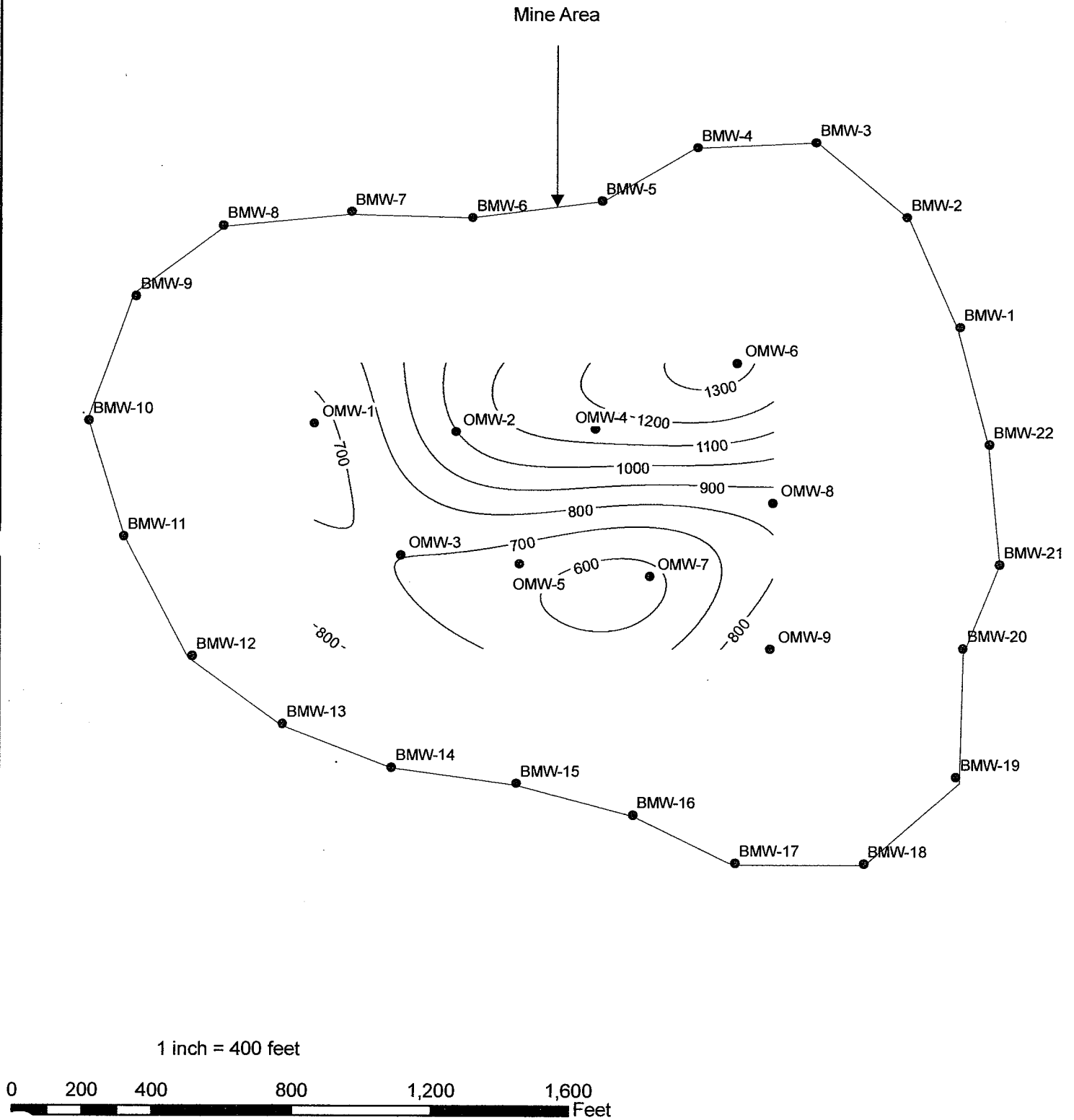


**Figure 5-1**

Drawn By: J.D.

Checked by: J.L. & C.H.

Date: August 25, 2008



**Figure 5-2**

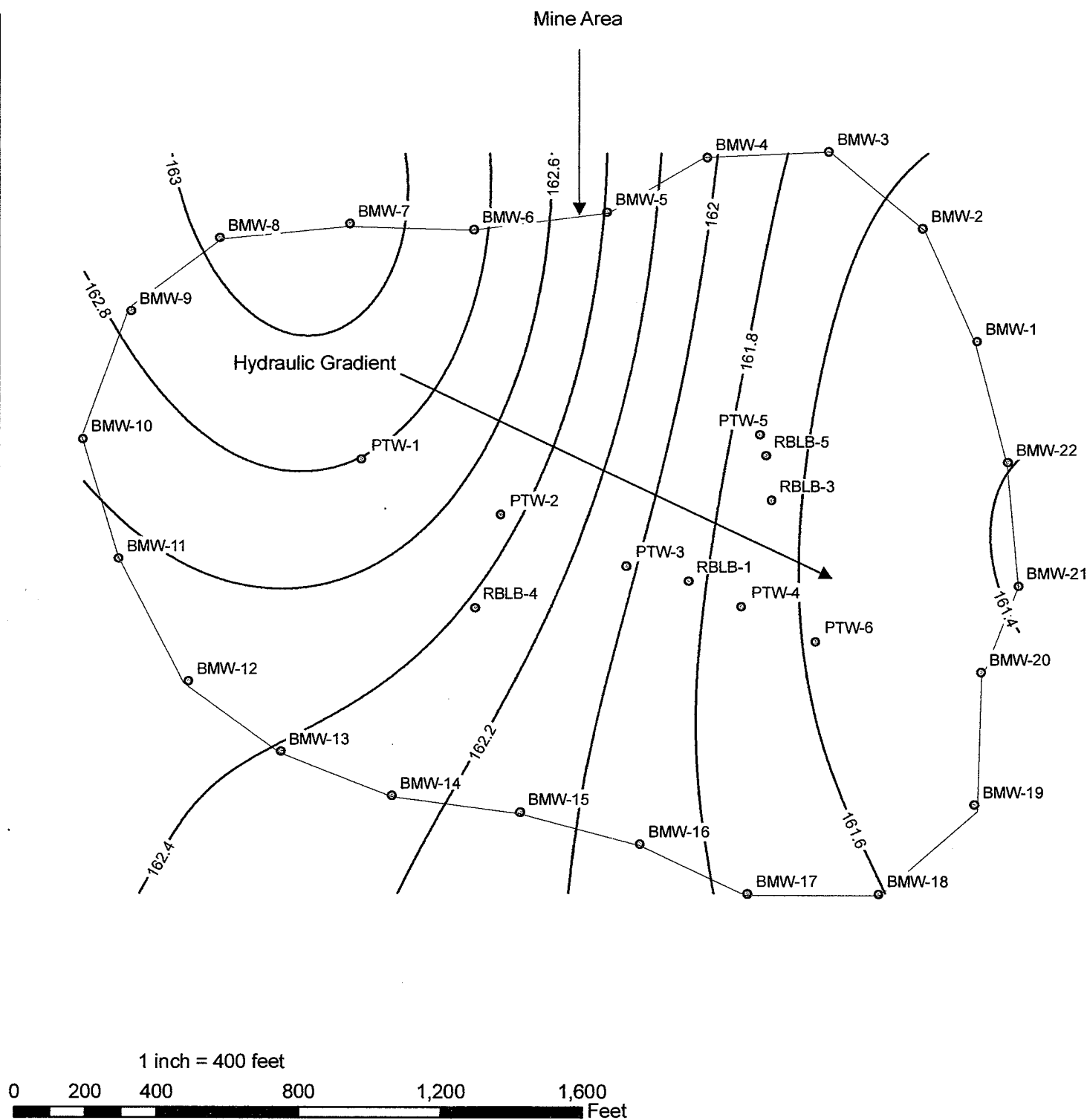
**Non-production Zone TDS  
Contour Map (Sand A)**

- Overlying Monitor Wells — Contours mg/L
- Baseline/Monitor Wells



**Figure 5-2**

Drawn By: J.D.  
Checked by: J.L. & C.H.  
Date: August 25, 2008



**Figure 5-3**

**Production Zone Piezometric  
Map (Sand B)**

— Contours (ft)    ○ Baseline/Monitor Wells

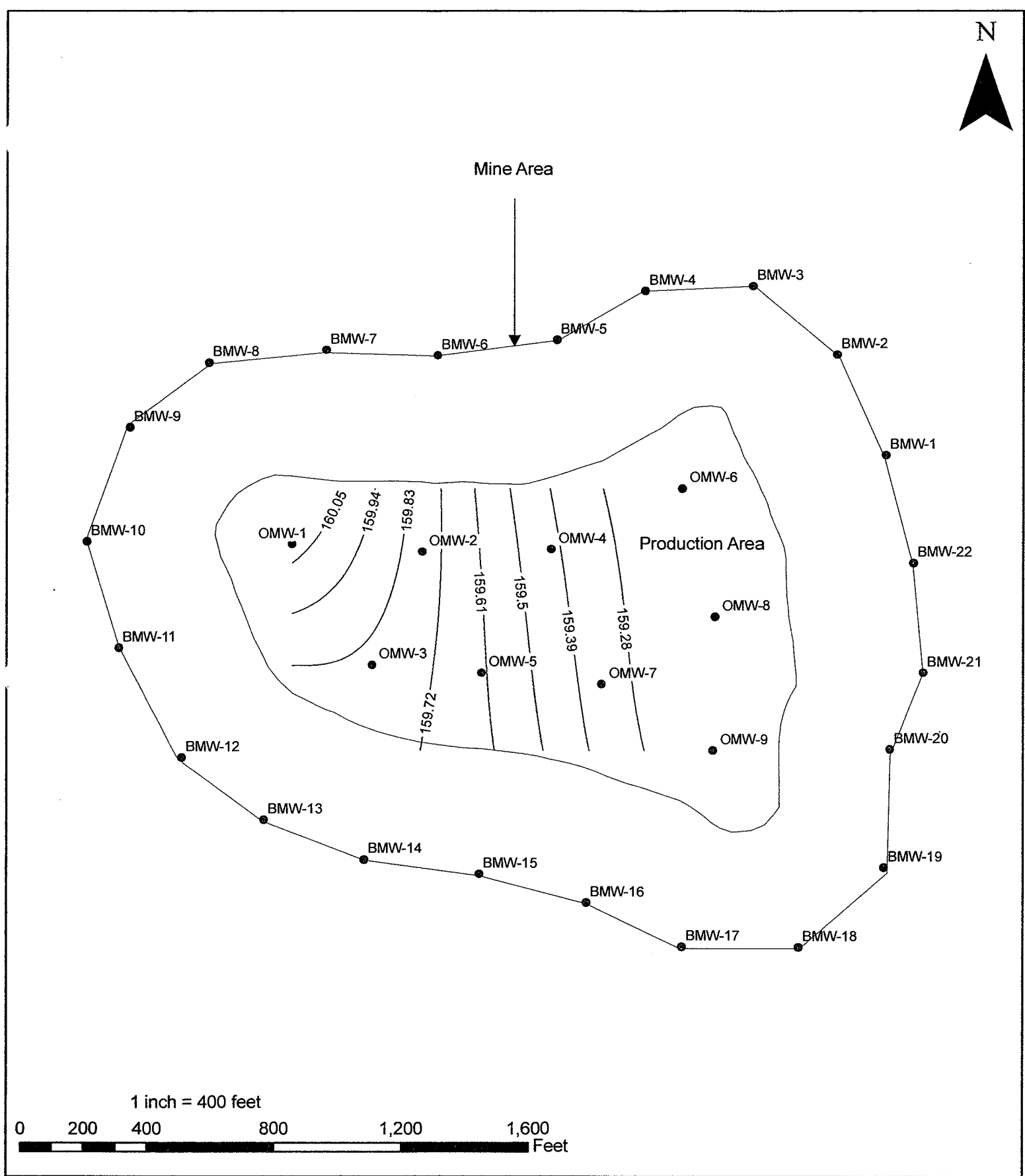


**Figure 5-3**

Drawn By: J.D.

Checked by: J.L., C.H., R.L.

Date: August 25, 2008



<b>Figure 5-4</b> Non-production Zone Piezometric Map (Sand A)	• Production Monitor Well Ring • Overlying Monitor Wells	— Contours (Feet) □ Production Area	<b>Figure 5-4</b> Drawn By: J.D. Checked by: J.L., C.H., & R.L. Date: August 25, 2008

**6**



## **6.0 Proposed Restoration Table, Monitor Well Designations and Upper Control Parameters**

### **6.1 Groundwater Analysis Report Summary**

As required by TCEQ, water quality values for the baseline wells must be given in a table provided by the agency titled Groundwater Analysis Report Summary: this requirement has been followed, and the water quality values for (1) the Non-production Zone (overlying Sand A); (2) Mine Zone Production Area; and (3) Production Area (Sand B) are summarized in Table 6.1. The well identification for each area is also included in the table.

### **6.2 Proposed Restoration Table**

Using the values from Table 6.1, a proposed Restoration Table was prepared. Table 6.2 is the proposed Restoration Table for PA-1. In accordance with 30 TAC §331.104(d)(1), the values in the table were chosen from the highest averages recorded from either the Mine Area column or the Production Area column.

### **6.3 Designated Monitor Wells**

The designated monitor wells are listed in Table 6.3.

### **6.4 Designated Baseline Wells**

Designated baseline wells are given in Table 6.4.

### **6.5 Proposed Upper Limits Control Parameters**

By far, the best parameters for indicating a change in water quality associated with in situ recovery or restoration operations are chloride and conductivity. These parameters not only provide the earliest indication of a possible excursion, they are also easy to measure, and changes can be quickly detected. In other words, they provide an immediate and reliable measure of change in water quality, and this in turn allows an operator to take corrective measures as soon as possible.

In the past, uranium was included as a third indicator for possibly suggesting that an excursion has occurred, but there was no scientific basis to support it as a proper indicator.

Table 6.1 GROUNDWATER ANALYSIS REPORT S  
SUMMARY

BASELINE WATER QUALITY

Company: Uranium Energy Corp  
Mine: Goliad Project  
Permit: URO 3075 Prod. Area: 1  
Date Summarized: September 4, 2008

PARAMETER	UNITS	NON PRODUCTION ZONE				PRODUCTION ZONE				PRODUCTION AREA				WELL I.D. BY AREA*			
		MINE AREA**				NON PROD.				PROD. ZONE				Prod. Zone			
		low	average	high	low	average	high	low	average	high	low	average	high	low	average	high	Prod.
1 Calcium	mg/l	114	184	310	82	97	110	87	99	110	87	99	110	OMW-1	99	110	PTW1
2 Magnesium	mg/l	9.2	18.7	32.4	14.5	17.5	20	10.9	15.9	20.2	10.9	15.9	20.2	OMW-2	15.9	20.2	Thru
3 Sodium	mg/l	83	110	133	93	105	120	94	102	117	94	102	117	OMW-3	102	117	PTW6
4 Potassium	mg/l	1.8	2.2	2.6	2.92	3.79	5.13	2.5	4.7	8.9	2.5	4.7	8.9	OMW-4	4.7	8.9	And
5 Carbonate	mg/l	0	0	0	0	0	0	0	0	0	0	0	0	OMW-5	0	0	RBL-1
6 Bicarbonate	mg/l	299	331	370	294	319	350	251	326	360	251	326	360	OMW-6	326	360	RBL-3
7 Sulfate	mg/l	47	99	168	15	58	89	9	45	82	9	45	82	OMW-7	45	82	RBL-4
8 Chloride	mg/l	146	266	584	158	165	172	150	163	167	150	163	167	OMW-8	163	167	RBL-5
9 Fluoride	mg/l	0.36	0.45	0.62	0.51	0.58	0.65	0.57	0.68	0.80	0.57	0.68	0.80	OMW-9	0.68	0.80	
10 Nitrate - N	mg/l	1.90	5.26	8.20	<0.01	0.01	0.01	0.01	0.02	0.05	0.01	0.02	0.05		0.02	0.05	
11 Silica	mg/l	16.1	18.3	21.4	12.3	15.7	18.1	12.1	21	32.2	12.1	21	32.2		21	32.2	
12 pH	std. units	6.98	7.24	7.39	7.28	7.58	8.18	7.30	7.46	7.79	7.30	7.46	7.79		7.46	7.79	
13 TDS	mg/l	615	904	1340	575	652	705	584	624	666	584	624	666		624	666	
14 Conductivity	µmhos	1040	1520	2450	1040	1104	1140	1000	1086	1160	1000	1086	1160		1086	1160	
15 Alkalinity	mg/l	245	271	303	241	262	287	206	268	295	206	268	295		268	295	
16 Ammonia-N	mg/l	<0.1	<0.1	0.1	<0.1	0.1	0.2	0.06	<0.1	<0.1	0.06	<0.1	<0.1		<0.1	<0.1	
17 Arsenic	mg/l	0.010	0.018	0.031	<0.002	0.008	0.069	<0.002	0.009	0.030	<0.002	0.009	0.030		0.009	0.030	
18 Cadmium	mg/l	<0.001	0.001	0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	
19 Iron	mg/l	<0.030	<0.030	<0.030	<0.030	0.043	0.196	<0.030	0.029	0.060	<0.030	0.029	0.060		0.029	0.060	
20 Lead	mg/l	<0.002	0.002	0.003	<0.002	0.002	<0.002	<0.002	0.002	0.004	<0.002	0.002	0.004		0.002	0.004	
21 Manganese	mg/l	<0.003	0.02	0.09	0.007	0.017	0.050	0.006	0.015	0.025	0.006	0.015	0.025		0.015	0.025	
22 Mercury	mg/l	<0.0004	0.0004	0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004		<0.0004	<0.0004	
23 Molybdenum	mg/l	<0.010	0.012	0.024	<0.01	0.035	0.481	<0.010	0.047	0.136	<0.010	0.047	0.136		0.047	0.136	
24 Selenium	mg/l	<0.003	0.007	0.012	<0.003	0.003	0.006	0.001	0.002	0.003	0.001	0.002	0.003		0.002	0.003	
25 Uranium	mg/l	0.006	0.009	0.014	<0.001	0.020	0.188	0.005	0.033	0.080	0.005	0.033	0.080		0.033	0.080	
26 Radium-226	pCi/l	0.5	2.3	6	0.9	12.1	41	17	245.8	1090	17	245.8	1090		245.8	1090	

\* List the identification numbers of wells used to obtain the high and low values for each parameter.

\*\*Monitor Wells

**Table 6.2 Proposed Restoration Table**

	<b>Production Area Average</b>	<b>Mine Area Average</b>	<b>Proposed Restoration Table</b>
Ca	99	97	99
Mg	15.9	17.5	17.5
Na	102	105	105
K	4.7	3.79	4.7
CO3	0	0	0
HCO3	326	319	326
SO4	45	58	58
Cl	163	165	165
NO3-N	0.02	0.01	0.02
F	0.68	0.58	0.68
SIO2	21.0	15.7	21.0
TDS	624	652	652
EC (umhos/cm)	1086	1104	1104
Alk as CaCO3	268	262	268
pH (Std. Unit)	7.46	7.58	7.58
As	0.009	0.008	0.009
Cd*	<0.001	0.001	0.001
Fe	0.029	0.043	0.043
Pb*	0.002	0.002	0.002
Mn	0.015	0.017	0.017
Hg*	<0.0004	<0.0004	<0.0004
Mo	0.047	0.035	0.047
Se	0.002	0.003	0.003
U	0.033	0.020	0.033
Ammonia-N*	<0.1	0.1	0.1
Ra-226 (pCi/l)	245.8	12.1	245.8

All units are mg/l unless otherwise noted.

\*These elements do not occur naturally in the aquifer nor are they part of the process.

Table 6.3 Designated Monitor Wells

Non-production Zone Overlying Sand A	Production Zone Monitor Wells (Mine Area)	Production Zone Monitor Wells (Mine Area)	Production Zone Monitor Wells (Mine Area)
OMW-1	BMW-1	BMW-10	BMW-19
OMW-2	BMW-2	BMW-11	BMW-20
OMW-3	BMW-3	BMW-12	BMW-21
OMW-4	BMW-4	BMW-13	BMW-22
OMW-5	BMW-5	BMW-14	
OMW-6	BMW-6	BMW-15	
OMW-7	BMW-7	BMW-16	
OMW-8	BMW-8	BMW-17	
OMW-9	BMW-9	BMW-18	

Table 6.4 Designated Production Zone Baseline Wells (Production Area)

---

PTW-1

PTW-2

PTW-3

PTW-4

PTW-5

PTW-6

RBL-1

PBL-3

RBL-4

RBL-5

---

Over the history of in situ uranium recovery in Texas, thousands of water samples that were routinely collected from hundreds of monitor wells rarely showed elevated uranium or radium-226. When excursions were detected, the indicators were invariably conductivity and chloride.

The use of uranium as an indicator parameter has come to the attention of the Nuclear Regulatory Commission (NRC). After evaluating it, NRC does not recommend using it as an indicator to detect excursions (see NUREG-1569, Nuclear Regulatory Commission's Standard Review Plan for In Situ Leach Uranium Extraction License Applications, Final Report, June 2003).

UEC is proposing to use the two best indicators (chloride and conductivity) for the Upper Limits Control Parameters. Using chloride and conductivity will provide the earliest warning of a possible excursion. UEC is also proposing that if an excursion is indicated by reaching or exceeding an upper control limit, part of the corrective action would include analyzing the water for uranium, radium-226 and other water quality constituents, as may be requested by TCEQ. Table 6.5 lists the proposed upper control limits. The values given in Table 6.5 were derived by adding 25% to the highest value recorded from the production area during baseline sampling. The method for setting the upper control limit is given in item 14 of the Technical Report for the Production Area Authorization for In Situ Uranium Mining of TCEQ's Production Area Authorization Application Form.

### **Table 6.5 Proposed Upper Limits Control Parameters**

#### **Production Area-1 (Overlying Sand A) Non-production Zone**

Chloride: 730 mg/l

Conductivity: 3,062  $\mu$ mhos

TDS: 1,675 mg/l

#### **Production Area-1 (Production Zone Sand B)**

Chloride: 209 mg/l

Conductivity: 1,450  $\mu$ mhos

TDS: 881 mg/l

## 7.0 Updated Mine Plan

The affixed seal covers the entire contents of this chapter.



August 27, 2008



**7**

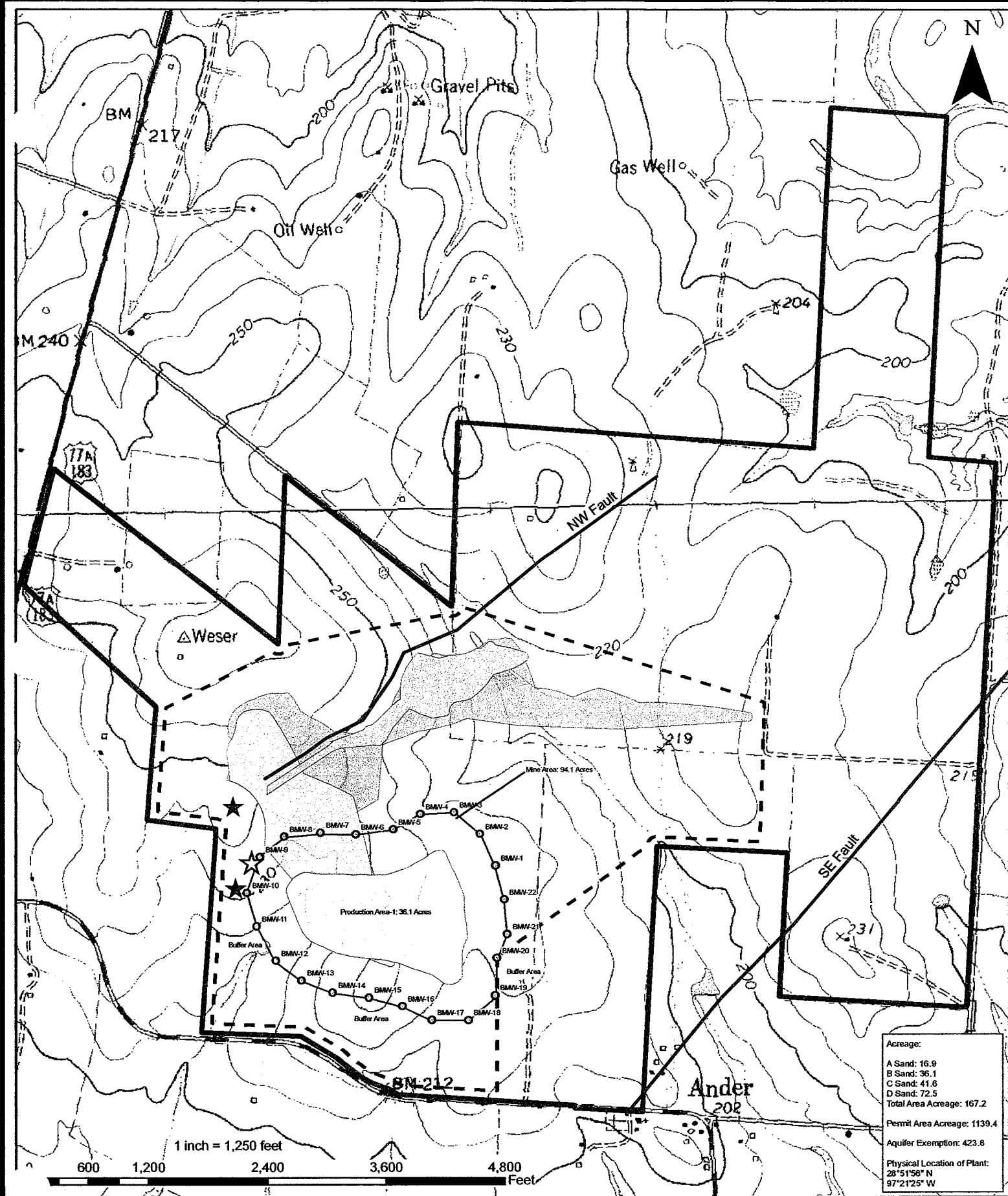
## **7.0     Updated Mine Plan**

### **7.1     Mine Plan Description**

During the past year, UEC has made refinements to the nature of the ore zones. To illustrate, the production area acreage for Sand B was initially estimated to be approximately 25.6 acres; following additional evaluation, production Sand B in PA-1 has been increased to just over 36 acres and Figure 7-1 Permit Map has been updated to show the size and shape of PA-1. The figure has also been updated to show: (1) the production zone monitor well ring; (2) the buffer area between the monitor well ring and the permit/lease boundary; (3) other proposed production areas and their respective acreages; (4) the proposed location of the production facility; and (5) the proposed locations of the waste disposal wells. The updated production and restoration schedules for the mine areas are described in Section 7.2.

### **7.2     Updated Production and Restoration Schedule**

An updated production and restoration schedule has been prepared and is given in Table 7.1. When compared to the estimate given when the Mine Permit Application was submitted to TCEQ, it can be seen that the start date for production is now estimated to begin in 2010. The original estimate showed an estimated start date in the fourth quarter of 2009. The schedule has also been updated to include one year stability periods. As far as operational changes during are concerned, there are no significant changes at this time. The projected new startup date and one year stability period for restoration are the only significant changes.



**Figure 7-1**  
**Permit Map**  
**Page 7-2**

• Baseline/Monitor Wells  
 ☆ Process Facility  
 ★ Proposed Disposal Wells  
 — Faults

□ Sand A  
 □ Sand B  
 □ Sand C  
 □ Sand D

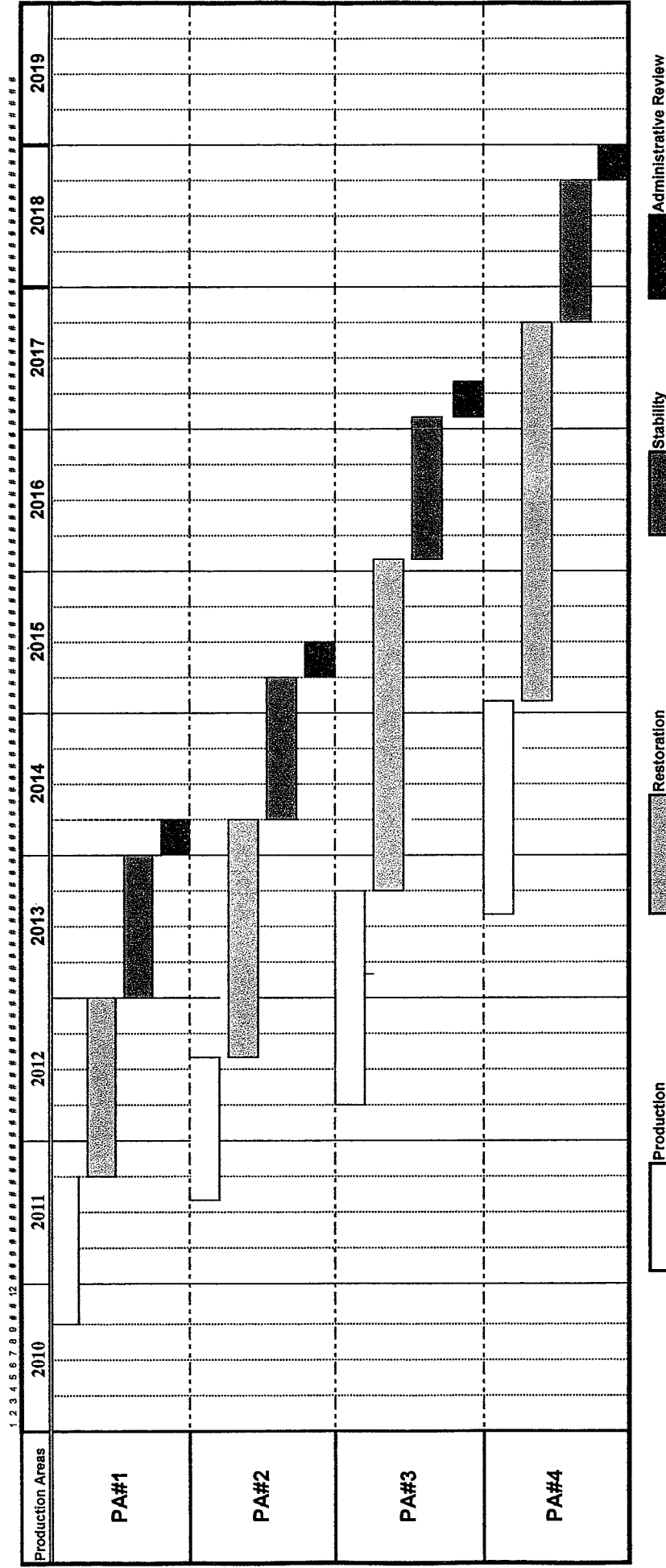
□ Monitor Well Ring  
 □ Aquifer Exemption Boundary  
 □ Mine/Lease Boundary  
 USGS Topographic Map

**UEC**  
 Uranium Energy Corp

**Figure 7-1**  
 Drawn By: J.D.  
 Checked by: J.L. & C.H.  
 Date: August 25, 2008

Table 7.1

Updated Production and Restoration Schedule



### 7.3 Restoration Progress Report

Since the project has yet to begin, there is no restoration progress to report. However, a brief summary of UEC's restoration procedures and plans for reporting restoration progress are outlined in the following discussion.

The technology for restoring groundwater to levels consistent with baseline involves using native groundwater sweep and reverse osmosis (R.O). The effectiveness of current-day restoration has been enhanced by many years of experience. Two major improvements include: 1) initiating restoration as soon as possible following uranium recovery in a given production area and 2) using R.O. during the mining process to keep competing ions from becoming too elevated.

A vital step in achieving successful restoration is to establish representative baseline water quality within the area where uranium will be recovered. In the early days of the industry not enough attention was given to developing a baseline that was representative of the area to be mined. Instead of establishing an adequate number of baseline wells in the potential mine area (the area that must be restored to pre-mining uses), production area baseline wells were inadvertently completed outside the mineralized area; as a result, average, low and high values established for baseline were not representative of the mineralized zone. Because a disproportionate number of baseline wells were completed in the non-mineralized zone this had the obvious affect of mischaracterizing the actual water quality of the mine area. Because of improper placement of wells, baseline conditions in the production area were erroneously shown to be of higher quality, and this in turn set up artificially low restoration targets for a number of constituents and made it impossible to achieve the desired goals. Recognizing this flaw, operators are now making an effort to properly characterize pre-mining groundwater quality in the areas where production will likely occur.

Given the backdrop just described, UEC diligently delineated the production area and constructed a baseline well pattern to properly characterize background water quality conditions. The groundwater quality analyses from this plan support the proposed Restoration Table goals.

UEC plans to use R.O. during the uranium recovery phase to minimize the elevation of competing ions. In doing this, uranium recovery efficiency will be enhanced and water quality will be maintained at a higher level. Maintaining a higher level of water quality during the recovery phase will allow restoration to proceed more quickly and effectively. Restoration and restoration progress will be in accordance with the terms specified in the permit (see Sections G.3, G.4 and G.5.d).

#### 7.4 Updated Fluid Handling Requirements vs. Capacity

Because information on the first production area has been further refined, the overall fluid balance shown on Table 7.2 Updated Fluid Handling Requirement vs. Capacity was re-examined for possible adjustments. Given that the estimates in the table must be based on the estimated maximum operational/restoration capacity, the refinements made to PA-1 do not result in any significant change to Table 7.2. As stated in Section 7.2 above, the main change in the schedule is due to an estimated new startup date and the one year stability period for restoration. Apart from this change, the fluid handling requirements and capacity information given in the Mine Permit Application remains valid.

Table 7.2

## Updated Fluid Handling Capacity vs. Fluid Disposal Requirements

Year 1 Mine Plan		Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	TOTAL
PA #1	Module 1	(kgals)									108,000	108,000	108,000	324,000
	Module 2	(kgals)												-
	Module 3	(kgals)												-
PA #2	Module 4	(kgals)												-
	Module 5	(kgals)												-
	Module 6	(kgals)												-
PA #3	Module 7	(kgals)												-
	Module 8	(kgals)												-
	Module 9	(kgals)												-
PA #4	Module 10	(kgals)												-
	Module 11	(kgals)												-
	Module 12	(kgals)												-
PA #5	Module 13	(kgals)												-
	Module 14	(kgals)												-
	Module 15	(kgals)												-
	Module 16	(kgals)												-
	Total Production Flow	(kgals)									108,000	108,000	108,000	324,000
	Total Restoration Flow	(kgals)									-	-	-	-
Disposal Wells Capacity		(kgals)									10,800	10,800	10,800	32,400
	Production Bleed	(kgals)									1,080	1,080	1,080	3,240
	Other Effluents	(kgals)									173	173	173	518
	Restoration RO Brine	(kgals)									-	-	-	-
	Rain Direct	(kgals)									39	39	39	118
	Total	(kgals)									1,292	1,292	1,292	3,876
Net Disposal Capacity		(kgals)									9,508	9,508	9,508	28,524
	Total Tank Capacity	(kgals)									180	180	180	540
	Emergency Capacity	(kgals)									90	90	90	270
	Emergency Capacity Available	(kgals)									9,598	9,598	9,598	28,794





Table 7.2

## Updated Fluid Handling Capacity vs. Fluid Disposal Requirements

[illegible]









Table 7.2

## Updated Fluid Handling Capacity vs. Fluid Disposal Requirements

PA #	PA #	Year 8 Mine Plan	85 86 87 88 89 90 91 92 93 94 95 96												TOTAL
			Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	
PA #1	Module 1	(kgals)													-
	Module 2	(kgals)													-
	Module 3	(kgals)													-
	Module 4	(kgals)													-
PA #2	Module 5	(kgals)													-
	Module 6	(kgals)													-
	Module 7	(kgals)													-
	Module 8	(kgals)													-
PA #3	Module 9	(kgals)													-
	Module 10	(kgals)													-
	Module 11	(kgals)													-
	Module 12	(kgals)													-
PA #4	Module 13	(kgals)	38,880												-
	Module 14	(kgals)													-
	Module 15	(kgals)													-
	Module 16	(kgals)													-
Total Production Flow			38,880	38,880	38,880	38,880	38,880	38,880	38,880	38,880	38,880				38,880
Total Restoration Flow			38,880	38,880	38,880	38,880	38,880	38,880	38,880	38,880	38,880				38,880
Disposal Wells Capacity			10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	129,600
Production Bleed			389	389	389	389	389	389	389	389	389				3,499
Other Effluents			173	173	173	173	173	173	173	173					1,382
Restoration RO Brine			9,720	9,720	9,720	9,720	9,720	9,720	9,720	9,720	9,720				87,480
Rain Direct			39	39	39	39	39	39	39	39	39	39	39	39	472
Total			10,321	10,321	10,321	10,321	10,321	10,321	10,321	10,321	10,148	39	39	39	92,833
Net Disposal Capacity			479	479	479	479	479	479	479	479	652	10,761	10,761	10,761	36,767
Total Tank Capacity			180	180	180	180	180	180	180	180	180	180	180	180	2,160
Emergency Capacity			90	90	90	90	90	90	90	90	90	90	90	90	1,080
Emergency Capacity Available			569	569	569	569	569	569	569	569	742	10,851	10,851	10,851	37,847



## Updated Fluid Handling Capacity vs. Fluid Disposal Requirements

[illegible]





8

## **8.0     Financial Security**

According to § 27.073 (a-1), A person to whom an in situ uranium mining injection well, monitoring well, or production well permit is issued shall be required by the commission to maintain a performance bond or other form of financial security to ensure that an abandoned well is properly plugged. Detailed requirements concerning financial surety are given in Title 30 of the Texas Administrative Code ("30 TAC") Chapter 331. According to Subchapter A, § 331.15 Financial Assurance Required, injection is prohibited for Class I and Class III wells which lack financial assurance. Chapter 37, Subchapter Q, § 37.7021 of 30 TAC requires an owner or operator subject to this subchapter to establish financial assurance for plugging and abandonment of Class III wells. Chapter 37, Subchapter Q, Financial Assurance for Underground Injection Control Wells establishes the requirements for demonstrating financial assurance for plugging and abandonment (*see* 30 TAC § 37.7001). Finally, additional financial assurance requirements are detailed in 30 TAC Subchapter I, §§ 331.142, 331.143 and 331.144. These rules require a permittee to: (1) secure and maintain adequate surety for plugging and abandonment as specified in Chapter 37, Subchapter Q; (2) prepare a plugging and abandonment cost estimate reflecting the period in the operation's life when plugging and abandonment would be most expensive; and (3) maintain the latest cost estimate as prepared under § 331.143(a) during the operational life of the project; and (4) certify and obtain certification from an independent licensed professional engineer or licensed professional geoscientist that plugging and abandonment have been accomplished in accordance with an approved plugging and abandonment plan.

Additionally, at least 60 days prior to drilling wells, UEC will post a form of financial assurance listed in 30 TAC § 37.7021. At this time, UEC anticipates that the surety mechanism would be: (1) a fully funded or pay-in trust; (2) a surety bond guaranteeing payment; (3) a surety bond guaranteeing performance; or (4) an irrevocable standby letter of credit.

During operations, UEC will submit plugging and abandonment cost estimates for the anticipated number of wells needed as the project goes forward. The cost estimate will be in current dollars and will include labor, materials, equipment, supplies and per diem.

For PA-1, it is anticipated that the wells listed in Table 8-1 will be needed. As shown in the table, some of the wells already exist and 7 others are nearing completion to further supplement production zone baseline water quality.

With respect to total depth and casing size, the proposed injectors and extractors will be completed at an average total depth of 194 feet below ground level, and the well casing will be 6 inch diameter PVC. For the existing wells, actual total depths are known, and these depths are summarized in Table 8-2.

Table 8.1 Wells Existing and Planned for PA-1

Injectors/ Extractors	Overlying Monitor Wells	Production Zone Baseline Wells	Production Zone Monitor Wells
200*	9**	17***	22**

\*To be completed.

\*\*Existing

\*\*\*At this writing, 10 of the 17 planned wells have been completed and sampled. Completion and sampling of 7 additional Sand B wells should be finished in early September.

Table 8.2 Total Depth of Existing Wells in PA-1

	Depth (Feet)		Depth (Feet)		Depth (Feet)		Depth (Feet)
OMW-1	97	BMW-1	209	BMW-10	194	BMW-19	218
OMW-2	110	BMW-2	206	BMW-11	183	BMW-20	200
OMW-3	106	BMW-3	205	BMW-12	180	BMW-21	206
OMW-4	119	BMW-4	193	BMW-13	188	BMW-22	208
OMW-5	120	BMW-5	204	BMW-14	206		
OMW-6	123	BMW-6	201	BMW-15	210		
OMW-7	119	BMW-7	199	BMW-16	206		
OMW-8	119	BMW-8	195	BMW-17	191		
OMW-9	113	BMW-9	197	BMW-18	212		
PTW-1	190						
PTW-2	211						
PTW-3	210						
PTW-4	208						
PTW-5	207						
PTW-6	206						
RBLB-1	205						
RBLB-3	220						
RBLB-4	205						
RBLB-5	183						

**APPENDIX A**

**LABORATORY REPORTS**

## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company: UEC  
 Identification: PAA-1  
 Sample Id: BMW-1  
 Laboratory: Jordan Laboratories (A Xenco Laboratories Company)

Report Date: 08/29/2008  
 Work Order No.: 302659\_002  
 Lab Description: M46-599  
 Sample Date/Time: 4/24/08 1615

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	88.20	4.40	228.86	41.49
MAGNESIUM (Mg)	19.50	1.60	74.73	15.12
SODIUM (Na)	104.00	4.52	221.21	42.64
POTASSIUM (K)	3.14	0.08	5.78	0.76

**TOTAL CATION** **10.61**

CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	350.0	5.74	250.08	51.93
SULFATE (SO <sub>4</sub> )	26.0	0.54	40.00	4.90
CHLORIDE (Cl)	169.0	4.77	361.84	43.16
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.60			
SILICA (SiO <sub>2</sub> )	16.1			

**Total Conductance: 1182.50**

**TOTAL ANION** **11.04**

**TOTAL ION** **777**

## ACCURACY CHECK

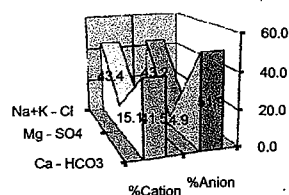
TDS (180 c)	620.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	601.5
EC (25 c)	1100.0 umhos/cm
EC (DIL) = 97.6 X 12.50 =	1220.0 umhos/cm
ALK. as CaCO <sub>3</sub>	287.0
pH	7.43 Std. Unit

		RANGE
ION	0.961	0.96 to 1.04
TDS	1.031	0.90 to 1.10
EC	1.032	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.006
CADMIUM (Cd)	<0.001
IRON (Fe)	0.196
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.022
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	<0.003
URANIUM (U)	0.013
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226	28.0 +/-	1.0
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
 842 Cantwell Ln  
 Corpus Christi, TX 78408

Remarks: Turbidity = 51.7 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity. Checked by:



# GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

<b>Company:</b>	UEC	<b>Report Date:</b>	08/29/2008
<b>Identification:</b>	PAA-1	<b>Work Order No.:</b>	302659_003
<b>Sample Id:</b>	BMW-2	<b>Lab Description:</b>	M46-600
<b>Laboratory:</b>	Jordan Laboratories (A Xenco Laboratories Company)	<b>Sample Date/Time:</b>	4/24/08 1715

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	81.50	4.07	211.48	40.86
MAGNESIUM (Mg)	17.20	1.41	65.91	14.21
SODIUM (Na)	100.80	4.38	214.40	44.05
POTASSIUM (K)	3.39	0.09	6.24	0.87

**TOTAL CATION** 9.95

CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	338.0	5.54	241.51	53.73
SULFATE (SO <sub>4</sub> )	15.0	0.31	23.08	3.03
CHLORIDE (Cl)	158.0	4.46	338.28	43.24
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.60			
SILICA (SiO <sub>2</sub> )	14.8			

**Total Conductance:** 1100.91

**TOTAL ANION** 10.31

**TOTAL ION** 729

## ACCURACY CHECK

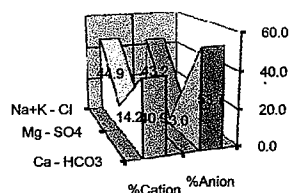
TDS (180 c)	575.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	560.3
EC (25 c)	1040.0 umhos/cm
EC (DIL) = 92.0 X 12.50 =	1150.0 umhos/cm
ALK. as CaCO <sub>3</sub>	277.0
pH	7.46 Std. Unit

		RANGE
ION	0.965	0.96 to 1.04
TDS	1.026	0.90 to 1.10
EC	1.045	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.007
CADMIUM (Cd)	<0.001
IRON (Fe)	0.061
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.012
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	<0.003
URANIUM (U)	0.017
AMMONIA-N (NH <sub>3</sub> -N)	0.2

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226	27.0 +/-	1.0
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
842 Cantwell Ln  
Corpus Christi, TX 78408

Remarks: Turbidity = 7.30 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity. Checked by:

## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

<b>Company:</b>	UEC	<b>Report Date:</b>	08/29/2008
<b>Identification:</b>	PAA-1	<b>Work Order No.:</b>	302659_004
<b>Sample Id:</b>	BMW-3	<b>Lab Description:</b>	M46-601
<b>Laboratory:</b>	Jordan Laboratories (A Xenco Laboratories Company)	<b>Sample Date/Time:</b>	4/25/08 0846

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	105.00	5.24	272.46	48.03
MAGNESIUM (Mg)	18.10	1.49	69.36	13.64
SODIUM (Na)	93.20	4.05	198.24	37.16
POTASSIUM (K)	4.98	0.13	9.17	1.17

<b>TOTAL CATION</b>	<b>10.91</b>
---------------------	--------------

CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	317.0	5.20	226.50	46.72
SULFATE (SO <sub>4</sub> )	61.0	1.27	93.86	11.42
CHLORIDE (Cl)	165.0	4.65	353.27	41.86
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.60			
SILICA (SiO <sub>2</sub> )	13.9			

<b>Total Conductance:</b>	<b>1222.86</b>
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<b>TOTAL ANION</b>	<b>11.12</b>
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<b>TOTAL ION</b>	<b>779</b>
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## ACCURACY CHECK

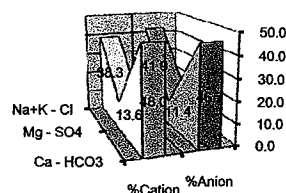
TDS (180 c)	643.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	620.3
EC (25 c)	1090.0 umhos/cm
EC (DIL) = 96.8 X 12.50 =	1210.0 umhos/cm
ALK. as CaCO <sub>3</sub>	260.0
pH	7.38 Std. Unit

		RANGE
ION	0.981	0.96 to 1.04
TDS	1.037	0.90 to 1.10
EC	0.989	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.005
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.009
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	0.011
SELENIUM (Se)	<0.003
URANIUM (U)	0.009
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226	9.8 +/-	0.3
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
842 Cantwell Ln  
Corpus Christi, TX 78408

Remarks:

Checked by:

NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant incre

## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company:	UEC	Report Date:	08/29/2008
Identification:	PAA-1	Work Order No.:	302704_001
Sample Id:	BMW-4	Lab Description:	M46-605
Laboratory:	Jordan Laboratories (A Xenco Laboratories Company)	Sample Date/Time:	4/28/08 1035

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	110.00	5.49	285.43	48.83
MAGNESIUM (Mg)	17.40	1.43	66.68	12.73
SODIUM (Na)	97.50	4.24	207.38	37.72
POTASSIUM (K)	3.17	0.08	5.84	0.72

<b>TOTAL CATION</b>	<b>11.24</b>
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CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	320.0	5.24	228.65	47.36
SULFATE (SO <sub>4</sub> )	55.0	1.15	84.62	10.34
CHLORIDE (Cl)	166.0	4.68	355.41	42.29
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.55			
SILICA (SiO <sub>2</sub> )	13.8			

<b>Total Conductance:</b>	<b>1234.01</b>
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<b>TOTAL ANION</b>	<b>11.07</b>
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<b>TOTAL ION</b>	<b>783</b>
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## ACCURACY CHECK

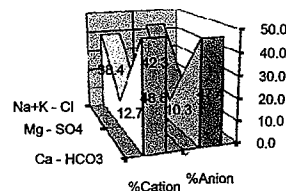
TDS (180 c)	640.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	623.4
EC (25 c)	1100.0 umhos/cm
EC (DIL) = 107.1 X 11.11 =	1189.9 umhos/cm
ALK. as CaCO <sub>3</sub>	262.0
pH	7.35 Std. Unit

		RANGE
ION	1.015	0.96 to 1.04
TDS	1.027	0.90 to 1.10
EC	0.964	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	<0.002
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.009
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	<0.003
URANIUM (U)	0.006
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226	29.0 +/-	1.0
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
842 Cantwell Ln  
Corpus Christi, TX 78408

Remarks: Turbidity = 6.75 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity. Checked by:

## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company:	UEC	Report Date:	08/29/2008
Identification:	PAA-1	Work Order No.:	302704_002
Sample Id:	BMW-5	Lab Description:	M46-606
Laboratory:	Jordan Laboratories (A Xenco Laboratories Company)	Sample Date/Time:	4/28/08 1135

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	105.00	5.24	272.46	47.57
MAGNESIUM (Mg)	16.60	1.37	63.62	12.39
SODIUM (Na)	99.00	4.31	210.57	39.10
POTASSIUM (K)	4.03	0.10	7.42	0.94

TOTAL CATION	11.01
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CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	318.0	5.21	227.22	47.51
SULFATE (SO <sub>4</sub> )	57.0	1.19	87.70	10.82
CHLORIDE (Cl)	162.0	4.57	346.85	41.67
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.60			
SILICA (SiO <sub>2</sub> )	13.2			

Total Conductance:	1215.83
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TOTAL ANION	10.97
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TOTAL ION	775
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## ACCURACY CHECK

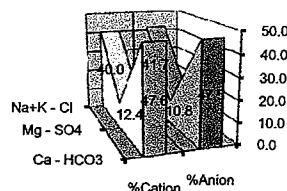
TDS (180 c)	638.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	616.4
EC (25 c)	1090.0 umhos/cm
EC (DIL) = 106.2 X 11.11 =	1179.9 umhos/cm
ALK. as CaCO <sub>3</sub>	261.0
pH	7.44 Std. Unit

		RANGE
ION	1.004	0.96 to 1.04
TDS	1.035	0.90 to 1.10
EC	0.970	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	<0.002
CADMIUM (Cd)	<0.001
IRON (Fe)	0.035
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.009
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	<0.003
URANIUM (U)	0.015
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

%Cations	%Anions
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## RADIATION-PICOCURIES/LITER

RADIUM 226	41.0 +/-	1.0
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
842 Cantwell Ln  
Corpus Christi, TX 78408

Remarks: Turbidity = <1.00 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity.

Checked by:

## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

<b>Company:</b>	UEC	<b>Report Date:</b>	08/29/2008
<b>Identification:</b>	PAA-1	<b>Work Order No.:</b>	302704_003
<b>Sample Id:</b>	BMW-6	<b>Lab Description:</b>	M46-607
<b>Laboratory:</b>	Jordan Laboratories (A Xenco Laboratories Company)	<b>Sample Date/Time:</b>	4/28/08 1245

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	105.00	5.24	272.46	47.56
MAGNESIUM (Mg)	16.90	1.39	64.76	12.62
SODIUM (Na)	99.00	4.31	210.57	39.09
POTASSIUM (K)	3.16	0.08	5.82	0.73
<b>TOTAL CATION</b>		<b>11.02</b>		
CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	310.0	5.08	221.50	46.52
SULFATE (SO <sub>4</sub> )	57.0	1.19	87.70	10.87
CHLORIDE (Cl)	165.0	4.65	353.27	42.62
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.60			
SILICA (SiO <sub>2</sub> )	13.3			
		<b>Total Conductance:</b>	<b>1216.09</b>	

	<b>TOTAL ANION</b>	<b>10.92</b>
<b>TOTAL ION</b>	770	

## ACCURACY CHECK

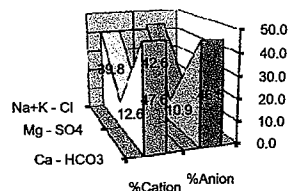
TDS (180 c)	640.0	
TDS (total ion - 0.5 HCO <sub>3</sub> )	615.0	
EC (25 c)	1090.0	umhos/cm
EC (DIL) = 105.3 X 11.11 =	1169.9	umhos/cm
ALK. as CaCO <sub>3</sub>	254.0	
pH	7.34	Std. Unit

	ION	RANGE
	1.009	0.96 to 1.04
TDS	1.041	0.90 to 1.10
EC	0.962	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.002
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.009
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	0.004
URANIUM (U)	0.002
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226	2.9 +/-	0.1
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
842 Cantwell Ln  
Corpus Christi, TX 78408

Remarks: Turbidity = <1.00 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity. Checked by:

## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

<b>Company:</b>	UEC	<b>Report Date:</b>	08/29/2008
<b>Identification:</b>	PAA-1	<b>Work Order No.:</b>	302704_004
<b>Sample Id:</b>	BMW-7	<b>Lab Description:</b>	M46-608
<b>Laboratory:</b>	Jordan Laboratories (A Xenco Laboratories Company)	<b>Sample Date/Time:</b>	4/28/08 1400

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	101.00	5.04	262.08	47.25
MAGNESIUM (Mg)	14.50	1.19	55.57	11.18
SODIUM (Na)	100.00	4.35	212.70	40.78
POTASSIUM (K)	3.34	0.09	6.15	0.80

<b>TOTAL CATION</b>	<b>10.67</b>
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CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	294.0	4.82	210.07	45.44
SULFATE (SO <sub>4</sub> )	53.0	1.10	81.55	10.41
CHLORIDE (Cl)	166.0	4.68	355.41	44.16
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.60			
SILICA (SiO <sub>2</sub> )	13.2			

<b>Total Conductance:</b>	<b>1183.52</b>
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<b>TOTAL ANION</b>	<b>10.60</b>
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<b>TOTAL ION</b>	<b>746</b>
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## ACCURACY CHECK

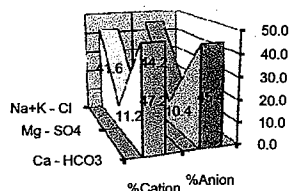
TDS (180 c)	653.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	598.6
EC (25 c)	1060.0 umhos/cm
EC (DIL) = 103.5 X 11.11 =	1149.9 umhos/cm
ALK. as CaCO <sub>3</sub>	241.0
pH	7.40 Std. Unit

		RANGE
ION	1.006	0.96 to 1.04
TDS	1.091	0.90 to 1.10
EC	0.972	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.002
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.007
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	<0.003
URANIUM (U)	0.004
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226	1.8 +/-	0.1
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
842 Cantwell Ln  
Corpus Christi, TX 78408

Remarks: Turbidity = 14.0 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity.

Checked by:

# GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company: UEC  
 Identification: PAA-1  
 Sample Id: BMW-8  
 Laboratory: Jordan Laboratories (A Xenco Laboratories Company)

Report Date: 08/29/2008  
 Work Order No.: 302779\_001  
 Lab Description: M46-610  
 Sample Date/Time: 4/29/08 0925

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	103.00	5.14	267.27	46.57
MAGNESIUM (Mg)	15.50	1.27	59.40	11.55
SODIUM (Na)	104.00	4.52	221.21	40.99
POTASSIUM (K)	3.81	0.10	7.02	0.88

TOTAL CATION 11.04

CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	304.0	4.98	217.21	46.78
SULFATE (SO <sub>4</sub> )	50.0	1.04	76.93	9.78
CHLORIDE (Cl)	164.0	4.63	351.13	43.44
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.60			
SILICA (SiO <sub>2</sub> )	12.3			

Total Conductance: 1200.17

TOTAL ANION 10.65

TOTAL ION 757

## ACCURACY CHECK

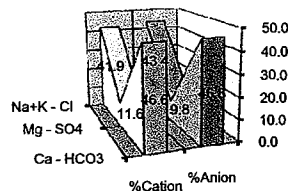
TDS (180 c) 658.0  
 TDS (total ion - 0.5 HCO<sub>3</sub>) 605.2  
 EC (25 c) 1070.0 umhos/cm  
 EC (DIL) = 104.4 X 11.11 = 1159.9 umhos/cm  
 ALK. as CaCO<sub>3</sub> 249.0  
 pH 7.42 Std. Unit

ION 1.036 RANGE 0.96 to 1.04  
 TDS 1.087 RANGE 0.90 to 1.10  
 EC 0.966 RANGE 0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	<0.002
CADMIUM (Cd)	<0.001
IRON (Fe)	0.036
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.009
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	<0.003
URANIUM (U)	0.003
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226 1.7 +/- 0.1  
 RADON 222 +/-

NOTE: QC documentation is on file at Jordan Labs  
 842 Cantwell Ln  
 Corpus Christi, TX 78408

Remarks: Turbidity = 5.42 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can significantly increase turbidity.

Checked by:

## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company: UEC  
 Identification: PAA-1  
 Sample Id: BMW-9  
 Laboratory: Jordan Laboratories (A Xenco Laboratories Company)

Report Date: 08/29/2008  
 Work Order No.: 302799\_002  
 Lab Description: M46-611  
 Sample Date/Time: 4/29/08 1035

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	108.00	5.39	280.24	47.70
MAGNESIUM (Mg)	15.40	1.27	59.02	11.21
SODIUM (Na)	105.00	4.57	223.34	40.43
POTASSIUM (K)	2.92	0.07	5.38	0.66

**TOTAL CATION** 11.30

CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	321.0	5.26	229.36	47.34
SULFATE (SO <sub>4</sub> )	48.0	1.00	73.85	8.99
CHLORIDE (Cl)	172.0	4.85	368.26	43.66
NITRATE (NO <sub>3</sub> -N)	0.01			
FLUORIDE (F)	0.62			
SILICA (SiO <sub>2</sub> )	13.0			

**Total Conductance:** 1239.44

**TOTAL ANION** 11.11

**TOTAL ION** 786

## ACCURACY CHECK

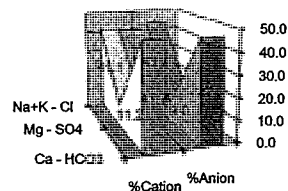
TDS (180 c) 680.0  
 TDS (total ion - 0.5 HCO<sub>3</sub>) 625.5  
 EC (25 c) 1100.0 umhos/cm  
 EC (DIL) = 108.0 X 11.11 = 1199.9 umhos/cm  
 ALK. as CaCO<sub>3</sub> 263.0  
 pH 7.42 Std. Unit

		RANGE
ION	1.017	0.96 to 1.04
TDS	1.087	0.90 to 1.10
EC	0.968	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	<0.002
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.032
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	<0.003
URANIUM (U)	0.188
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226	1.8 +/-	0.1
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
 842 Cantwell Ln  
 Corpus Christi, TX 78408

Remarks: Turbidity = 7.40 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity. Checked by:



# GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

<b>Company:</b>	UEC	<b>Report Date:</b>	09/03/2008
<b>Identification:</b>	PAA-1 Baseline	<b>Work Order No.:</b>	302184_001
<b>Sample Id:</b>	BMW-10	<b>Lab Description:</b>	M46-575
<b>Laboratory:</b>	Jordan Laboratories (A Xenco Laboratories Company)	<b>Sample Date/Time:</b>	4/21/08 1245

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	96.00	4.79	249.10	45.38
MAGNESIUM (Mg)	14.60	1.20	55.95	11.38
SODIUM (Na)	103.00	4.48	219.08	42.45
POTASSIUM (K)	3.28	0.08	6.04	0.79

**TOTAL CATION** 10.56

CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	309.0	5.06	220.79	47.97
SULFATE (SO <sub>4</sub> )	47.0	0.98	72.32	9.27
CHLORIDE (Cl)	160.0	4.51	342.57	42.76
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.60			
SILICA (SiO <sub>2</sub> )	15.3			

**Total Conductance:** 1165.84

**TOTAL ANION** 10.56

**TOTAL ION** 749

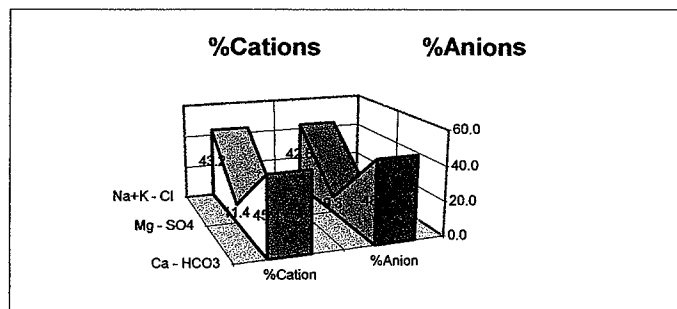
## ACCURACY CHECK

TDS (180 c)	610.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	594.3
EC (25 c)	1050.0 umhos/cm
EC (DIL) = 111.0 X 10.00 =	1110.0 umhos/cm
ALK. as CaCO <sub>3</sub>	253.0
pH	7.88 Std. Unit

		RANGE
ION	1.000	0.96 to 1.04
TDS	1.026	0.90 to 1.10
EC	0.952	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.004
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.007
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	<0.003
URANIUM (U)	<0.001
AMMONIA-N (NH <sub>3</sub> -N)	<0.1



## RADIATION-PICOCURIES/LITER

RADIUM 226	1.5 +/-	0.1
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
842 Cantwell Ln  
Corpus Christi, TX 78408

Remarks: Turbidity = 23.0 NTU Note: some samples are reduced and contain H<sub>2</sub>S that may lead to a significant increase in turbidity.

Checked by:

# GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company: UEC  
 Identification: PAA-1  
 Sample Id: BMW-11  
 Laboratory: Jordan Laboratories (A Xenco Laboratories Company)

Report Date: 08/29/2008  
 Work Order No.: 302184\_002  
 Lab Description: M46-576  
 Sample Date/Time: 4/21/08 1410

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	94.90	4.74	246.25	43.62
MAGNESIUM (Mg)	17.20	1.41	65.91	13.03
SODIUM (Na)	106.00	4.61	225.46	42.47
POTASSIUM (K)	3.75	0.10	6.91	0.88

**TOTAL CATION** 10.86

CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	316.0	5.18	225.79	46.12
SULFATE (SO <sub>4</sub> )	63.0	1.31	96.93	11.68
CHLORIDE (Cl)	168.0	4.74	359.70	42.20
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.57			
SILICA (SiO <sub>2</sub> )	15.8			

**Total Conductance:** 1226.95

**TOTAL ANION** 11.23

**TOTAL ION** 785

## ACCURACY CHECK

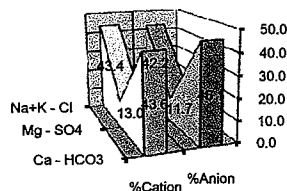
TDS (180 c) 678.0  
 TDS (total ion - 0.5 HCO<sub>3</sub>) 627.2  
 EC (25 c) 1110.0 umhos/cm  
 EC (DIL) = 106.4 X 11.11 = 1182.1 umhos/cm  
 ALK. as CaCO<sub>3</sub> 2.6  
 pH 8.18 Std. Unit

		RANGE
ION	<u>0.967</u>	0.96 to 1.04
TDS	<u>1.081</u>	0.90 to 1.10
EC	<u>0.963</u>	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.007
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.012
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	<0.003
URANIUM (U)	0.001
AMMONIA-N (NH <sub>3</sub> -N)	0.2

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226 1.7 +/- 0.1  
 RADON 222  +/-

NOTE: QC documentation is on file at Jordan Labs  
 842 Cantwell Ln  
 Corpus Christi, TX 78408

Remarks: Turbidity = 3.03 NTU Note: Samples are reduced and contain H<sub>2</sub>S that may lead to a significant increase in turbidity.

Checked by:

## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company:	UEC	Report Date:	08/29/2008
Identification:	PAA-1	Work Order No.:	302184_003
Sample Id:	BMW-12	Lab Description:	M46-577
Laboratory:	Jordan Laboratories (A Xenco Laboratories Company)	Sample Date/Time:	4/21/08 1507

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	98.90	4.94	256.63	44.45
MAGNESIUM (Mg)	17.90	1.47	68.60	13.26
SODIUM (Na)	106.00	4.61	225.46	41.53
POTASSIUM (K)	3.29	0.08	6.06	0.76

TOTAL CATION	11.10
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CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	306.0	5.01	218.64	43.21
SULFATE (SO <sub>4</sub> )	89.0	1.85	136.94	15.96
CHLORIDE (Cl)	168.0	4.74	359.70	40.83
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.55			
SILICA (SiO <sub>2</sub> )	15.8			

Total Conductance:	1272.02
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TOTAL ANION	11.61
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TOTAL ION	805
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## ACCURACY CHECK

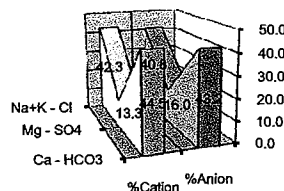
TDS (180 c)	698.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	652.4
EC (25 c)	1140.0 umhos/cm
EC (DIL) = 97.6 X 12.50 =	1220.0 umhos/cm
ALK. as CaCO <sub>3</sub>	251.0
pH	7.89 Std. Unit

		RANGE
ION	0.957	0.96 to 1.04
TDS	1.070	0.90 to 1.10
EC	0.959	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.007
CADMIUM (Cd)	<0.001
IRON (Fe)	0.050
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.033
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	<0.003
URANIUM (U)	0.008
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226	4.9 +/-	0.2
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
842 Cantwell Ln  
Corpus Christi, TX 78408

Remarks: Turbidity = 26.1 NTU Note: Samples are reduced and contain H<sub>2</sub>S that may lead to a significant increase in turbidity

Checked by:

## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company:	UEC	Report Date:	11/18/2008
Identification:	PAA-1	Work Order No.:	302315_001
Sample Id:	BMW-13	Lab Description:	M46-578
Laboratory:	Jordan Laboratories (A Xenco Laboratories Company)	Sample Date/Time:	04/22/08 1300

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	94.50	4.72	245.21	42.37
MAGNESIUM (Mg)	18.90	1.55	72.43	13.96
SODIUM (Na)	109.00	4.74	231.84	42.60
POTASSIUM (K)	4.66	0.12	8.58	1.07

TOTAL CATION	11.13
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CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	321.0	5.26	229.36	46.26
SULFATE (SO <sub>4</sub> )	70.0	1.46	107.70	12.82
CHLORIDE (Cl)	165.0	4.65	353.27	40.93
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.51			
SILICA (SiO <sub>2</sub> )	17.9			

Total Conductance:	1248.40
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TOTAL ANION	11.37
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TOTAL ION	801
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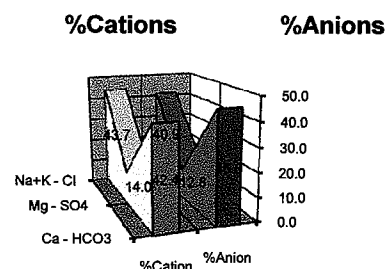
## ACCURACY CHECK

TDS (180 c)	658.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	641.0
EC (25 c)	1130.0 umhos/cm
EC (DIL) = 99.2 X 12.50 =	1240.0 umhos/cm
ALK. as CaCO <sub>3</sub>	273.0
pH	7.95 Std. Unit

		RANGE
ION	0.979	0.96 to 1.04
TDS	1.027	0.90 to 1.10
EC	0.993	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.011
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.018
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	0.014
SELENIUM (Se)	<0.003
URANIUM (U)	0.031
AMMONIA-N (NH <sub>3</sub> -N)	<0.1



## RADIATION-PICOCURIES/LITER

RADIUM 226	2.4 +/-	0.2
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
842 Cantwell Ln  
Corpus Christi, TX 78408

Remarks: Turbidity = <1.00 NTU Note: Samples are reduced and contain H<sub>2</sub>S that may lead to a significant increase in turbidity Checked by:

# GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company:	UEC	Report Date:	11/18/2008
Identification:	PAA-1	Work Order No.:	302315_002
Sample Id:	BMW-14	Lab Description:	M46-579
Laboratory:	Jordan Laboratories (A Xenco Laboratories Company)	Sample Date/Time:	04/22/08 1406

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	99.00	4.94	256.89	44.45
MAGNESIUM (Mg)	18.50	1.52	70.90	13.69
SODIUM (Na)	105.00	4.57	223.34	41.09
POTASSIUM (K)	3.33	0.09	6.13	0.77

<b>TOTAL CATION</b>		<b>11.11</b>		
CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	333.0	5.46	237.94	47.73
SULFATE (SO <sub>4</sub> )	73.0	1.52	112.32	13.29
CHLORIDE (Cl)	158.0	4.46	338.28	38.98
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.60			
SILICA (SiO <sub>2</sub> )	17.4			

**Total Conductance: 1245.79**

<b>TOTAL ANION</b>	<b>11.43</b>
<b>TOTAL ION</b>	<b>808</b>

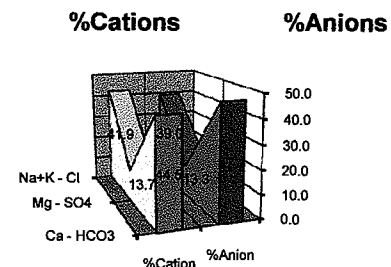
## ACCURACY CHECK

TDS (180 c)	645.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	641.3
EC (25 c)	1130.0 umhos/cm
EC (DIL) = 95.2 X 12.50 =	1190.0 umhos/cm
ALK. as CaCO <sub>3</sub>	272.0
pH	7.84 Std. Unit

	<b>RANGE</b>
ION	0.972 0.96 to 1.04
TDS	1.006 0.90 to 1.10
EC	0.955 0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.008
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.021
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	0.006
URANIUM (U)	0.001
AMMONIA-N (NH <sub>3</sub> -N)	<0.1



## RADIATION-PICOCURIES/LITER

RADIUM 226	1.5 +/-	0.1
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
842 Cantwell Ln  
Corpus Christi, TX 78408

Remarks: Turbidity = 1.36 NTU Note: Samples are reduced and contain H<sub>2</sub>S that may lead to a significant increase in turbidity

Checked by:

## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company:	UEC	Report Date:	11/18/2008
Identification:	PAA-1	Work Order No.:	302315_003
Sample Id:	BMW-15	Lab Description:	M46-580
Laboratory:	Jordan Laboratories (A Xenco Laboratories Company)	Sample Date/Time:	04/22/2008 00:00

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	98.90	4.94	256.63	44.41
MAGNESIUM (Mg)	18.00	1.48	68.98	13.32
SODIUM (Na)	106.00	4.61	225.46	41.49
POTASSIUM (K)	3.34	0.09	6.15	0.77

<b>TOTAL CATION</b>	<b>11.11</b>
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CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	332.0	5.44	237.22	47.19
SULFATE (SO <sub>4</sub> )	73.0	1.52	112.32	13.18
CHLORIDE (Cl)	162.0	4.57	346.85	39.63
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.57			
SILICA (SiO <sub>2</sub> )	18.0			

<b>Total Conductance:</b>	<b>1253.61</b>
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<b>TOTAL ANION</b>	<b>11.53</b>
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<b>TOTAL ION</b>	<b>812</b>
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## ACCURACY CHECK

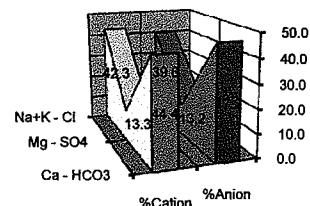
TDS (180 c)	705.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	645.8
EC (25 c)	1130.0 umhos/cm
EC (DIL) = 96.0 X 12.50 =	1200.0 umhos/cm
ALK. as CaCO <sub>3</sub>	272.0
pH	7.85 Std. Unit

		RANGE
ION	0.964	0.96 to 1.04
TDS	1.092	0.90 to 1.10
EC	0.957	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.006
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.021
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	<0.003
URANIUM (U)	0.001
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226	0.9 +/-	0.1
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
842 Cantwell Ln  
Corpus Christi, TX 78408

Remarks: Turbidity = 1.26 NTU Note: Samples are reduced and contain H<sub>2</sub>S that may lead to a significant increase in turbidity.

Checked by:

# GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company: UEC  
 Identification: PAA-1  
 Sample Id: BMW-16  
 Laboratory: Jordan Laboratories (A Xenco Laboratories Company)

Report Date: 11/18/2008  
 Work Order No.: 302326\_001  
 Lab Description: M46-592  
 Sample Date/Time: 04/23/2008 00:00

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	81.60	4.07	211.74	38.56
MAGNESIUM (Mg)	16.60	1.37	63.62	12.93
SODIUM (Na)	115.00	5.00	244.61	47.37
POTASSIUM (K)	4.69	0.12	8.64	1.14

**TOTAL CATION 10.56**

CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	301.0	4.93	215.07	45.40
SULFATE (SO <sub>4</sub> )	56.0	1.17	86.16	10.73
CHLORIDE (Cl)	169.0	4.77	361.84	43.87
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.52			
SILICA (SiO <sub>2</sub> )	16.2			

**Total Conductance: 1191.66**

**TOTAL ANION 10.87**

**TOTAL ION 761**

## ACCURACY CHECK

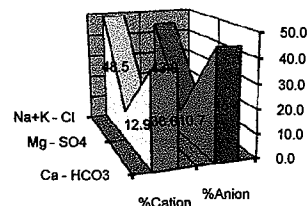
TDS (180 c)	643.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	610.1
EC (25 c)	1090.0 umhos/cm
EC (DIL) = 114.0 X 10.00 =	1140.0 umhos/cm
ALK. as CaCO <sub>3</sub>	247.0
pH	8.05 Std. Unit

		RANGE
ION	0.972	0.96 to 1.04
TDS	1.054	0.90 to 1.10
EC	0.957	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.008
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.015
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	0.035
SELENIUM (Se)	<0.003
URANIUM (U)	0.007
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226	1.9 +/-	0.1
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
 842 Cantwell Ln  
 Corpus Christi, TX 78408

Remarks: Turbidity = <1.00 NTU Note: Samples are reduced and contain H<sub>2</sub>S that may lead to a significant increase in turbidity.

Checked by:

## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company: UEC  
 Identification: PAA-1  
 Sample Id: BMW-17  
 Laboratory: Jordan Laboratories (A Xenco Laboratories Company)

Report Date: 11/18/2008  
 Work Order No.: 302326\_002  
 Lab Description: M46-593  
 Sample Date/Time: 4/23/08 1330

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	94.90	4.74	246.25	41.91
MAGNESIUM (Mg)	17.40	1.43	66.68	12.66
SODIUM (Na)	116.00	5.05	246.73	44.66
POTASSIUM (K)	3.38	0.09	6.22	0.77

**TOTAL CATION** **11.30**

CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	346.0	5.67	247.22	49.56
SULFATE (SO <sub>4</sub> )	55.0	1.15	84.62	10.01
CHLORIDE (Cl)	164.0	4.63	351.13	40.43
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.60			
SILICA (SiO <sub>2</sub> )	18.1			

**Total Conductance: 1248.87**

**TOTAL ANION** **11.44**

**TOTAL ION** **815**

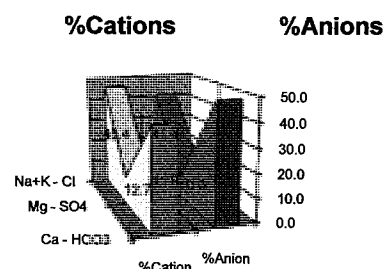
## ACCURACY CHECK

TDS (180 c)	685.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	642.4
EC (25 c)	1140.0 umhos/cm
EC (DIL) = 99.2 X 12.50 =	1240.0 umhos/cm
ALK. as CaCO <sub>3</sub>	284.0
pH	7.49 Std. Unit

		RANGE
ION	0.987	0.96 to 1.04
TDS	1.066	0.90 to 1.10
EC	0.993	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.006
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.026
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	<0.003
URANIUM (U)	0.002
AMMONIA-N (NH <sub>3</sub> -N)	<0.1



## RADIATION-PICOCURIES/LITER

RADIUM 226	1.5 +/-	0.1
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
 842 Cantwell Ln  
 Corpus Christi, TX 78408

Remarks: Turbidity = 1.85 NTU Note: Samples are reduced and contain H<sub>2</sub>S that may lead to a significant increase in turbidity

Checked by:



## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

<b>Company:</b>	UEC	<b>Report Date:</b>	08/29/2008
<b>Identification:</b>	PAA-1	<b>Work Order No.:</b>	302430_001
<b>Sample Id:</b>	BMW-18	<b>Lab Description:</b>	M46-594
<b>Laboratory:</b>	Jordan Laboratories (A Xenco Laboratories Company)	<b>Sample Date/Time:</b>	4/24/08 0915

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	88.30	4.41	229.12	39.24
MAGNESIUM (Mg)	17.90	1.47	68.60	13.11
SODIUM (Na)	120.00	5.22	255.24	46.48
POTASSIUM (K)	5.13	0.13	9.45	1.17

<b>TOTAL CATION</b>	<b>11.23</b>
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CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	325.0	5.33	232.22	47.19
SULFATE (SO <sub>4</sub> )	56.0	1.17	86.16	10.33
CHLORIDE (Cl)	170.0	4.80	363.98	42.48
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.55			
SILICA (SiO <sub>2</sub> )	18.1			

<b>Total Conductance:</b>	<b>1244.77</b>
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<b>TOTAL ANION</b>	<b>11.29</b>
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<b>TOTAL ION</b>	<b>801</b>
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## ACCURACY CHECK

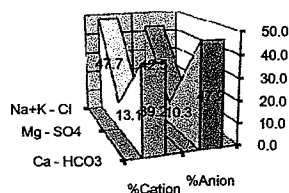
TDS (180 c)	658.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	638.5
EC (25 c)	1130.0 umhos/cm
EC (DIL) = 100.0 X 12.50 =	1250.0 umhos/cm
ALK. as CaCO <sub>3</sub>	266.0
pH	7.46 Std. Unit

		RANGE
ION	0.995	0.96 to 1.04
TDS	1.031	0.90 to 1.10
EC	1.004	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.004
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.010
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	<0.003
URANIUM (U)	0.005
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226	1.8 +/-	0.1
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
842 Cantwell Ln  
Corpus Christi, TX 78408

Remarks: Turbidity = 1.07 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity Checked by:

## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

<b>Company:</b>	UEC	<b>Report Date:</b>	08/29/2008
<b>Identification:</b>	PAA-1	<b>Work Order No.:</b>	302430_002
<b>Sample Id:</b>	BMW-19	<b>Lab Description:</b>	M46-595
<b>Laboratory:</b>	Jordan Laboratories (A Xenco Laboratories Company)	<b>Sample Date/Time:</b>	4/24/08 1045

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	94.50	4.72	245.21	42.78
MAGNESIUM (Mg)	18.20	1.50	69.75	13.58
SODIUM (Na)	108.00	4.70	229.72	42.62
POTASSIUM (K)	4.42	0.11	8.14	1.03
<b>TOTAL CATION</b>		<b>11.02</b>		
CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	320.0	5.24	228.65	46.05
SULFATE (SO <sub>4</sub> )	62.0	1.29	95.39	11.34
CHLORIDE (Cl)	172.0	4.85	368.26	42.61
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.53			
SILICA (SiO <sub>2</sub> )	17.9			
		<b>Total Conductance:</b>	<b>1245.11</b>	

## TOTAL ANION

11.39

TOTAL ION

798

## ACCURACY CHECK

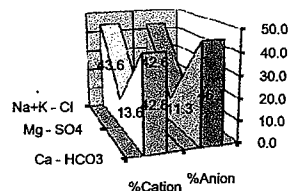
TDS (180 c) 655.0  
 TDS (total ion - 0.5 HCO<sub>3</sub>) 637.6  
 EC (25 c) 1130.0 umhos/cm  
 EC (DIL) = 100.8 X 12.50 = 1260.0 umhos/cm  
 ALK. as CaCO<sub>3</sub> 262.0  
 pH 7.50 Std. Unit

	ION	RANGE
	0.968	0.96 to 1.04
TDS	1.027	0.90 to 1.10
EC	1.012	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.006
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.012
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	0.012
SELENIUM (Se)	0.003
URANIUM (U)	0.008
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226	8.1 +/-	0.3
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
 842 Cantwell Ln  
 Corpus Christi, TX 78408

Remarks: Turbidity = 6.40 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity

Checked by:

## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company: UEC  
 Identification: PAA-1  
 Sample Id: BMW-20  
 Laboratory: Jordan Laboratories (A Xenco Laboratories Company)

Report Date: 08/29/2008  
 Work Order No.: 302430\_003  
 Lab Description: M46-569  
 Sample Date/Time: 4/24/08 1205

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	90.20	4.50	234.05	42.16
MAGNESIUM (Mg)	18.00	1.48	68.98	13.86
SODIUM (Na)	106.00	4.61	225.46	43.19
POTASSIUM (K)	3.31	0.08	6.10	0.79

**TOTAL CATION** **10.68**

CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	314.0	5.15	224.36	46.46
SULFATE (SO <sub>4</sub> )	64.0	1.33	98.47	12.03
CHLORIDE (Cl)	163.0	4.60	348.99	41.51
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.65			
SILICA (SiO <sub>2</sub> )	17.0			

**Total Conductance:** **1206.41**

**TOTAL ANION** **11.08**

**TOTAL ION** **776**

## ACCURACY CHECK

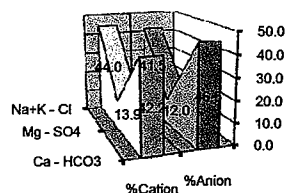
TDS (180 c)	635.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	619.2
EC (25 c)	1100.0 umhos/cm
EC (DIL) = 98.4 X 12.50 =	1230.0 umhos/cm
ALK. as CaCO <sub>3</sub>	257.0
pH	7.50 Std. Unit

		RANGE
ION	0.964	0.96 to 1.04
TDS	1.026	0.90 to 1.10
EC	1.020	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.069
CADMIUM (Cd)	<0.001
IRON (Fe)	0.037
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.050
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	0.481
SELENIUM (Se)	<0.003
URANIUM (U)	0.057
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226	40.0 +/-	1.0
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
 842 Cantwell Ln  
 Corpus Christi, TX 78408

Remarks: Turbidity = 5.53 Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity

Checked by:

## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company: UEC  
 Identification: PAA-1  
 Sample Id: BMW-21  
 Laboratory: Jordan Laboratories (A Xenco Laboratories Company)

Report Date: 08/29/2008  
 Work Order No.: 302430\_004  
 Lab Description: M46-597  
 Sample Date/Time: 4/24/08 1325

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	95.30	4.76	247.29	42.75
MAGNESIUM (Mg)	19.60	1.61	75.11	14.49
SODIUM (Na)	107.00	4.65	227.59	41.84
POTASSIUM (K)	4.00	0.10	7.37	0.92

**TOTAL CATION** 11.12

CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	317.0	5.20	226.50	46.43
SULFATE (SO <sub>4</sub> )	63.0	1.31	96.93	11.72
CHLORIDE (Cl)	166.0	4.68	355.41	41.85
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.62			
SILICA (SiO <sub>2</sub> )	17.7			

**Total Conductance:** 1236.20

**TOTAL ANION** 11.19

**TOTAL ION** 790

## ACCURACY CHECK

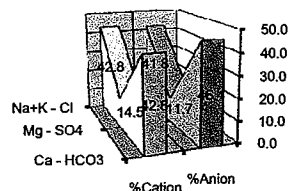
TDS (180 c) 650.0  
 TDS (total ion - 0.5 HCO<sub>3</sub>) 631.7  
 EC (25 c) 1120.0 umhos/cm  
 EC (DIL) = 100.0 X 12.50 = 1250.0 umhos/cm  
 ALK. as CaCO<sub>3</sub> 260.0  
 pH 7.28 Std. Unit

		RANGE
ION	0.994	0.96 to 1.04
TDS	1.029	0.90 to 1.10
EC	1.011	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.009
CADMIUM (Cd)	<0.001
IRON (Fe)	0.063
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.019
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	0.048
SELENIUM (Se)	0.004
URANIUM (U)	0.029
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226 34.0 +/- 1.0  
 RADON 222 +/-

NOTE: QC documentation is on file at Jordan Labs  
 842 Cantwell Ln  
 Corpus Christi, TX 78408

Remarks: Turbidity = 17.4 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity. Checked by:

## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company: UEC  
 Identification: PAA-1  
 Sample Id: BMW-22  
 Laboratory: Jordan Laboratories (A Xenco Laboratories Company)

Report Date: 08/29/2008  
 Work Order No.: 302659\_001  
 Lab Description: M46-598  
 Sample Date/Time: 4/24/08 1455

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	95.80	4.78	248.58	43.18
MAGNESIUM (Mg)	20.00	1.64	76.64	14.86
SODIUM (Na)	104.00	4.52	221.21	40.86
POTASSIUM (K)	4.80	0.12	8.84	1.11

**TOTAL CATION** 11.07

CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	312.0	5.11	222.93	44.80
SULFATE (SO <sub>4</sub> )	75.0	1.56	115.40	13.68
CHLORIDE (Cl)	168.0	4.74	359.70	41.52
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.57			
SILICA (SiO <sub>2</sub> )	17.1			

**Total Conductance:** 1253.30

**TOTAL ANION** 11.41

**TOTAL ION** 797

## ACCURACY CHECK

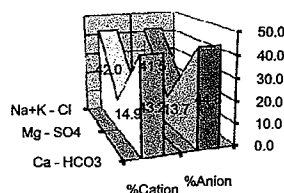
TDS (180 c)	668.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	641.3
EC (25 c)	1140.0 umhos/cm
EC (DIL) = 102.4 X 12.50 =	1280.0 umhos/cm
ALK. as CaCO <sub>3</sub>	256.0
pH	7.30 Std. Unit

		RANGE
ION	0.970	0.96 to 1.04
TDS	1.042	0.90 to 1.10
EC	1.021	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.007
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.011
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	<0.003
URANIUM (U)	0.030
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226	22.0 +/-	1.0
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
 842 Cantwell Ln  
 Corpus Christi, TX 78408

Remarks: Turbidity = 7.97 Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity.

Checked by:

# GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

<b>Company:</b>	UEC	<b>Report Date:</b>	08/28/2008
<b>Identification:</b>	PAA-1	<b>Work Order No.:</b>	302799_003
<b>Sample Id:</b>	PTW-1	<b>Lab Description:</b>	M46-612
<b>Laboratory:</b>	Jordan Laboratories (A Xenco Laboratories Company)	<b>Sample Date/Time:</b>	4/29/08 1300

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	87.00	4.34	225.75	41.57
MAGNESIUM (Mg)	11.30	0.93	43.30	8.90
SODIUM (Na)	117.00	5.09	248.86	48.73
POTASSIUM (K)	3.29	0.08	6.06	0.81

**TOTAL CATION** 10.44

CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	322.0	5.28	230.08	48.37
SULFATE (SO <sub>4</sub> )	47.0	0.98	72.32	8.97
CHLORIDE (Cl)	165.0	4.65	353.27	42.66
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.79			
SILICA (SiO <sub>2</sub> )	12.1			

**Total Conductance:** 1179.63

**TOTAL ANION** 10.91

**TOTAL ION** 765

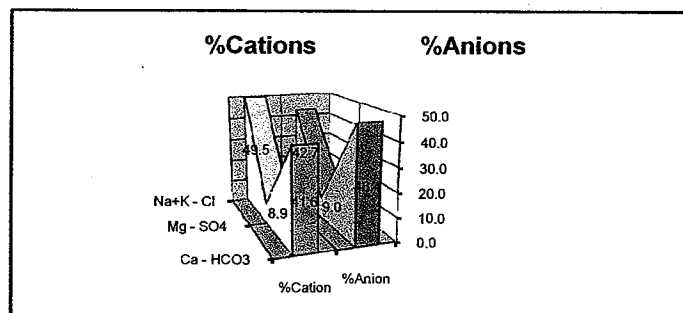
## ACCURACY CHECK

TDS (180 c)	593.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	604.5
EC (25 c)	1000.0 umhos/cm
EC (DIL) = 114.0 X 10.00 =	1140.0 umhos/cm
ALK. as CaCO <sub>3</sub>	264.0
pH	7.32 Std. Unit

		RANGE
ION	0.957	0.96 to 1.04
TDS	0.981	0.90 to 1.10
EC	0.966	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.008
CADMIUM (Cd)	<0.001
IRON (Fe)	0.031
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.012
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	0.136
SELENIUM (Se)	<0.003
URANIUM (U)	0.032
AMMONIA-N (NH <sub>3</sub> -N)	<0.1



## RADIATION-PICOCURIES/LITER

RADIUM 226	17.0 +/-	1.0
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
842 Cantwell Ln  
Corpus Christi, TX 78408

Remarks: Turbidity = 41.6 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity.

Checked by:

# GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

<b>Company:</b>	UEC	<b>Report Date:</b>	08/29/2008
<b>Identification:</b>	PAA-1	<b>Work Order No.:</b>	302799_004
<b>Sample Id:</b>	PTW-2	<b>Lab Description:</b>	M46-613
<b>Laboratory:</b>	Jordan Laboratories (A Xenco Laboratories Company)	<b>Sample Date/Time:</b>	4/29/08 1510

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	90.00	4.49	233.53	43.64
MAGNESIUM (Mg)	10.90	0.90	41.77	8.71
SODIUM (Na)	110.00	4.78	233.97	46.49
POTASSIUM (K)	4.68	0.12	8.62	1.16

**TOTAL CATION** 10.29

CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	251.0	4.11	179.34	40.86
SULFATE (SO <sub>4</sub> )	61.0	1.27	93.86	12.62
CHLORIDE (Cl)	166.0	4.68	355.41	46.52
NITRATE (NO <sub>3</sub> -N)	0.02			
FLUORIDE (F)	0.67			
SILICA (SiO <sub>2</sub> )	13.5			

**Total Conductance:** 1146.51

**TOTAL ANION** 10.07

**TOTAL ION** 708

## ACCURACY CHECK

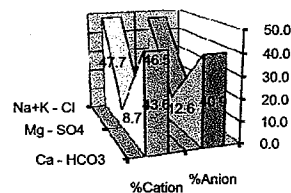
TDS (180 c) 620.0  
TDS (total ion - 0.5 HCO<sub>3</sub>) 582.3  
EC (25 c) 1020.0 umhos/cm  
EC (DIL) = 110.0 X 10.00 = 1100.0 umhos/cm  
ALK. as CaCO<sub>3</sub> 206.0  
pH 7.55 Std. Unit

	<u>1.022</u>	<u>0.96 to 1.04</u>
ION		
TDS	<u>1.065</u>	<u>0.90 to 1.10</u>
EC	<u>0.959</u>	<u>0.95 to 1.05</u>

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.010
CADMIUM (Cd)	<0.001
IRON (Fe)	0.017
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.006
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	0.070
SELENIUM (Se)	<0.003
URANIUM (U)	0.009
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

<b>RADIUM 226</b>	<u>17.0</u> +/-	<u>1.0</u>
<b>RADON 222</b>	<u></u> +/-	<u></u>

NOTE: QC documentation is on file at Jordan Labs  
842 Cantwell Ln  
Corpus Christi, TX 78408

Remarks: Turbidity = 3.82 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity. Checked by:

## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company: UEC  
 Identification: PAA-1 baseline  
 Sample Id: PTW-3  
 Laboratory: Jordan Laboratories (A Xenco Laboratories Company)

Report Date: 08/29/2008  
 Work Order No.: 303655\_001  
 Lab Description: M46-655  
 Sample Date/Time: 5/8/08 1545

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	110.00	5.49	285.43	48.38
MAGNESIUM (Mg)	17.50	1.44	67.06	12.68
SODIUM (Na)	100.00	4.35	212.70	38.33
POTASSIUM (K)	2.69	0.07	4.95	0.61

**TOTAL CATION** 11.35

CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	346.0	5.67	247.22	50.22
SULFATE (SO <sub>4</sub> )	45.0	0.94	69.24	8.30
CHLORIDE (Cl)	166.0	4.68	355.41	41.48
NITRATE (NO <sub>3</sub> -N)	0.02			
FLUORIDE (F)	0.65			
SILICA (SiO <sub>2</sub> )	14.5			

**Total Conductance:** 1242.02

**TOTAL ANION** 11.29

**TOTAL ION** 802

## ACCURACY CHECK

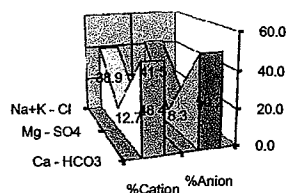
TDS (180 c) 640.0  
 TDS (total ion - 0.5 HCO<sub>3</sub>) 629.4  
 EC (25 c) 1120.0 umhos/cm  
 EC (DIL) = 112.5 X 11.11 = 1249.9 umhos/cm  
 ALK. as CaCO<sub>3</sub> 284.0  
 pH 7.35 Std. Unit

**RANGE**  
 ION 1.005 0.96 to 1.04  
 TDS 1.017 0.90 to 1.10  
 EC 1.006 0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.007
CADMIUM (Cd)	<0.001
IRON (Fe)	0.063
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.025
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	<0.003
URANIUM (U)	0.009
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226 38.0 +/- 1.0  
 RADON 222 +/-

NOTE: QC documentation is on file at Jordan Labs  
 842 Cantwell Ln  
 Corpus Christi, TX 78408

Remarks: Turbidity = 15.5 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity. Checked by:



## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

<b>Company:</b>	UEC	<b>Report Date:</b>	09/03/2008
<b>Identification:</b>	PAA-1 Baseline	<b>Work Order No.:</b>	303655_003
<b>Sample Id:</b>	PTW-4	<b>Lab Description:</b>	M46-657
<b>Laboratory:</b>	Jordan Laboratories (A Xenco Laboratories Company)	<b>Sample Date/Time:</b>	5/8/08 1800

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	109.00	5.44	282.83	47.69
MAGNESIUM (Mg)	15.10	1.24	57.87	10.89
SODIUM (Na)	106.00	4.61	225.46	40.42
POTASSIUM (K)	4.48	0.11	8.25	1.00

<b>TOTAL CATION</b>	<b>11.41</b>
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CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	338.0	5.54	241.51	49.18
SULFATE (SO <sub>4</sub> )	50.0	1.04	76.93	9.24
CHLORIDE (Cl)	166.0	4.68	355.41	41.58
NITRATE (NO <sub>3</sub> -N)	0.05			
FLUORIDE (F)	0.62			
SILICA (SiO <sub>2</sub> )	14.3			

<b>Total Conductance:</b>	<b>1248.27</b>
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<b>TOTAL ANION</b>	<b>11.26</b>
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<b>TOTAL ION</b>	<b>804</b>
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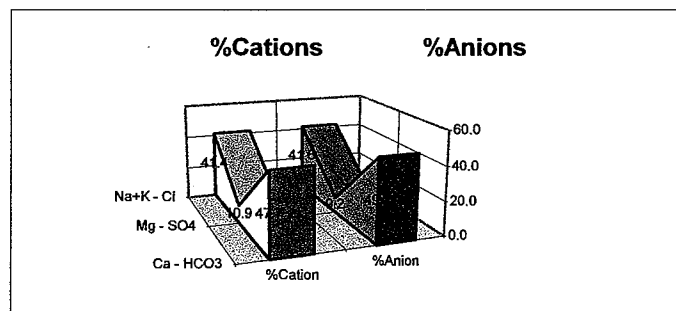
## ACCURACY CHECK

TDS (180 c)	638.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	634.6
EC (25 c)	1120.0 umhos/cm
EC (DIL) = 113.4 X 11.11 =	1259.9 umhos/cm
ALK. as CaCO <sub>3</sub>	277.0
pH	7.37 Std. Unit

		RANGE
ION	1.013	0.96 to 1.04
TDS	1.005	0.90 to 1.10
EC	1.009	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.009
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.015
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	0.043
SELENIUM (Se)	<0.003
URANIUM (U)	0.059
AMMONIA-N (NH <sub>3</sub> -N)	<0.1



## RADIATION-PICOCURIES/LITER

RADIUM 226	196.0 +/-	1.0
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
842 Cantwell Ln  
Corpus Christi, TX 78408

marks: Turbidity = 13.2 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity.

Checked by:

## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company:	UEC	Report Date:	08/29/2008
Identification:	PAA-1 Baseline	Work Order No.:	303693_001
Sample Id:	PTW-5	Lab Description:	M46-659
Laboratory:	Jordan Laboratories (A Xenco Laboratories Company)	Sample Date/Time:	5/12/08 1215

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	104.00	5.19	269.86	47.93
MAGNESIUM (Mg)	15.90	1.31	60.93	12.08
SODIUM (Na)	98.10	4.27	208.66	39.41
POTASSIUM (K)	2.48	0.06	4.57	0.59

TOTAL CATION	10.83
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CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	360.0	5.90	257.23	54.57
SULFATE (SO <sub>4</sub> )	11.0	0.23	16.92	2.12
CHLORIDE (Cl)	166.0	4.68	355.41	43.31
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.57			
SILICA (SiO <sub>2</sub> )	13.6			

Total Conductance:	1173.58
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TOTAL ANION	10.81
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TOTAL ION	772
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## ACCURACY CHECK

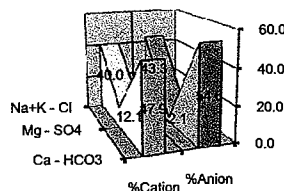
TDS (180 c)	623.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	591.7
EC (25 c)	1070.0 umhos/cm
EC (DIL) = 105.3 X 11.11 =	1169.9 umhos/cm
ALK. as CaCO <sub>3</sub>	295.0
pH	7.32 Std. Unit

		RANGE
ION	1.002	0.96 to 1.04
TDS	1.053	0.90 to 1.10
EC	0.997	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.002
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	0.002
MANGANESE (Mn)	0.008
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	<0.003
URANIUM (U)	0.005
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226	357.0 +/-	2.0
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
842 Cantwell Ln  
Corpus Christi, TX 78408

Remarks: Turbidity = 5.06 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity. Checked by:

## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company: UEC  
 Identification: PAA-1 Baseline  
 Sample Id: PTW-6  
 Laboratory: Jordan Laboratories (A Xenco Laboratories Company)

Report Date: 08/29/2008  
 Work Order No.: 303693\_003  
 Lab Description: M46-661  
 Sample Date/Time: 5/12/08 1420

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	106.00	5.29	275.05	47.41
MAGNESIUM (Mg)	16.50	1.36	63.23	12.16
SODIUM (Na)	102.00	4.44	216.96	39.77
POTASSIUM (K)	2.84	0.07	5.23	0.65

**TOTAL CATION** **11.16**

CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	344.0	5.64	245.79	50.61
SULFATE (SO <sub>4</sub> )	38.0	0.79	58.47	7.10
CHLORIDE (Cl)	167.0	4.71	357.55	42.29
NITRATE (NO <sub>3</sub> -N)	<0.01			
FLUORIDE (F)	0.57			
SILICA (SiO <sub>2</sub> )	14.2			

**Total Conductance: 1222.28**

**TOTAL ANION** **11.14**

**TOTAL ION** **791**

## ACCURACY CHECK

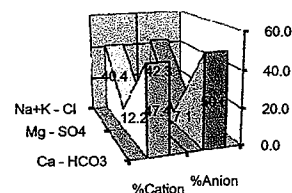
TDS (180 c)	620.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	619.1
EC (25 c)	1110.0 umhos/cm
EC (DIL) = 98.4 X 12.50 =	1230.0 umhos/cm
ALK. as CaCO <sub>3</sub>	282.0
pH	7.30 Std. Unit

		RANGE
ION	1.001	0.96 to 1.04
TDS	1.001	0.90 to 1.10
EC	1.006	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	<0.002
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	0.004
MANGANESE (Mn)	0.013
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	<0.003
URANIUM (U)	0.010
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226	202.0 +/-	1.0
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
 842 Cantwell Ln  
 Corpus Christi, TX 78408

Remarks: Turbidity = <1.00 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity.

Checked by:

## LABORATORY ANALYTICAL REPORT

**Client:** Uranium Energy Corp  
**Project:** Weesatche Baseline Sampling  
**Lab ID:** C07070627-002  
**Client Sample ID:** RBLB-1

**Report Date:** 08/01/07  
**Collection Date:** 07/12/07 11:45  
**Date Received:** 07/13/07  
**Matrix:** Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Alkalinity, Total as CaCO <sub>3</sub>	272	mg/L		1		A2320 B	07/23/07 08:37 / bas
Carbonate as CO <sub>3</sub>	ND	mg/L		1		A2320 B	07/23/07 08:37 / bas
Bicarbonate as HCO <sub>3</sub>	332	mg/L		1		A2320 B	07/23/07 08:37 / bas
Calcium	100	mg/L		0.5		E200.7	07/26/07 15:43 / ts
Chloride	161	mg/L		1		A4500-Cl B	07/18/07 11:26 / jl
Fluoride	0.7	mg/L		0.1		A4500-F C	07/23/07 12:30 / bas
Magnesium	19.0	mg/L		0.5		E200.7	07/26/07 15:43 / ts
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH <sub>3</sub> G	07/17/07 15:32 / ljl
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	07/16/07 15:42 / jal
Potassium	6.6	mg/L		0.5		E200.7	07/26/07 15:43 / ts
Silica	32.2	mg/L		0.1		E200.7	07/26/07 15:43 / ts
Sodium	98.3	mg/L		0.5		E200.7	07/26/07 15:43 / ts
Sulfate	82	mg/L	D	2		A4500-SO <sub>4</sub> E	07/17/07 11:12 / zd
<b>PHYSICAL PROPERTIES</b>							
Conductivity	1160	umhos/cm		1.0		A2510 B	07/16/07 14:55 / ml
pH	7.43	s.u.		0.01		A4500-H B	07/16/07 14:55 / ml
Solids, Total Dissolved TDS @ 180 C	644	mg/L		10		A2540 C	07/16/07 15:16 / ml
<b>METALS - DISSOLVED</b>							
Arsenic	0.006	mg/L		0.001		E200.8	07/28/07 01:22 / bws
Cadmium	ND	mg/L		0.01		E200.8	07/28/07 01:22 / bws
Iron	ND	mg/L		0.03		E200.7	07/26/07 15:43 / ts
Lead	ND	mg/L		0.05		E200.8	07/28/07 01:22 / bws
Manganese	0.02	mg/L		0.01		E200.8	07/28/07 01:22 / bws
Mercury	ND	mg/L		0.001		E200.8	07/28/07 01:22 / bws
Molybdenum	ND	mg/L		0.1		E200.8	07/28/07 01:22 / bws
Selenium	0.001	mg/L		0.001		E200.8	07/28/07 01:22 / bws
Uranium	0.0615	mg/L		0.0003		E200.8	07/28/07 01:22 / bws
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	393	pCi/L		0.2		E903.0	07/24/07 16:15 / trs
Radium 226 precision (±)	5.7	pCi/L				E903.0	07/24/07 16:15 / trs
<b>DATA QUALITY</b>							
A/C Balance (± 5)	-3.18	%				Calculation	07/28/07 12:58 / bws
Anions	11.7	meq/L				Calculation	07/28/07 12:58 / bws
Cations	11.0	meq/L				Calculation	07/28/07 12:58 / bws
Solids, Total Dissolved Calculated	663	mg/L				Calculation	07/28/07 12:58 / bws
TDS Balance (0.80 - 1.20)	0.970	dec. %				Calculation	07/28/07 12:58 / bws

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

D - RL increased due to sample matrix interference

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

## LABORATORY ANALYTICAL REPORT

**Client:** Uranium Energy Corp  
**Project:** Weesatche Baseline Sampling  
**Lab ID:** C07070627-001  
**Client Sample ID:** RBLB-3

**Report Date:** 08/01/07  
**Collection Date:** 07/12/07 10:30  
**Date Received:** 07/13/07  
**Matrix:** Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Alkalinity, Total as CaCO <sub>3</sub>	253	mg/L		1		A2320 B	07/23/07 08:37 / bas
Carbonate as CO <sub>3</sub>	3	mg/L		1		A2320 B	07/23/07 08:37 / bas
Bicarbonate as HCO <sub>3</sub>	302	mg/L		1		A2320 B	07/23/07 08:37 / bas
Calcium	91.2	mg/L		0.5		E200.7	07/26/07 15:39 / ts
Chloride	163	mg/L		1		A4500-Cl B	07/18/07 11:25 / jl
Fluoride	0.7	mg/L		0.1		A4500-F C	07/23/07 12:27 / bas
Magnesium	15.8	mg/L		0.5		E200.7	07/26/07 15:39 / ts
Nitrogen, Ammonia as N	0.05	mg/L		0.05		A4500-NH <sub>3</sub> G	07/17/07 15:30 / ljl
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	07/16/07 15:39 / jal
Potassium	8.9	mg/L		0.5		E200.7	07/26/07 15:39 / ts
Silica	31.6	mg/L		0.1		E200.7	07/26/07 15:39 / ts
Sodium	95.3	mg/L		0.5		E200.7	07/26/07 15:39 / ts
Sulfate	41	mg/L		1		A4500-SO <sub>4</sub> E	07/17/07 11:09 / zd
<b>PHYSICAL PROPERTIES</b>							
Conductivity	1070	umhos/cm		1.0		A2510 B	07/16/07 14:53 / ml
pH	7.79	s.u.		0.01		A4500-H B	07/16/07 14:53 / ml
Solids, Total Dissolved TDS @ 180 C	614	mg/L		10		A2540 C	07/16/07 15:16 / ml
<b>METALS - DISSOLVED</b>							
Arsenic	0.030	mg/L		0.001		E200.8	07/28/07 01:16 / bws
Cadmium	ND	mg/L		0.01		E200.8	07/28/07 01:16 / bws
Iron	ND	mg/L		0.03		E200.7	07/26/07 15:39 / ts
Lead	ND	mg/L		0.05		E200.8	07/28/07 01:16 / bws
Manganese	0.02	mg/L		0.01		E200.8	07/28/07 01:16 / bws
Mercury	ND	mg/L		0.001		E200.8	07/28/07 01:16 / bws
Molybdenum	ND	mg/L		0.1		E200.8	07/28/07 01:16 / bws
Selenium	0.002	mg/L		0.001		E200.8	07/28/07 01:16 / bws
Uranium	0.0797	mg/L		0.0003		E200.8	07/28/07 01:16 / bws
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	111	pCi/L		0.2		E903.0	07/24/07 16:15 / trs
Radium 226 precision (±)	3.9	pCi/L				E903.0	07/24/07 16:15 / trs
<b>DATA QUALITY</b>							
A/C Balance (± 5)	-1.40	%				Calculation	07/28/07 12:57 / bws
Anions	10.5	meq/L				Calculation	07/28/07 12:57 / bws
Cations	10.2	meq/L				Calculation	07/28/07 12:57 / bws
Solids, Total Dissolved Calculated	599	mg/L				Calculation	07/28/07 12:57 / bws
TDS Balance (0.80 - 1.20)	1.03	dec. %				Calculation	07/28/07 12:57 / bws

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

MCL - Maximum contaminant level.  
 ND - Not detected at the reporting limit.

## LABORATORY ANALYTICAL REPORT

**Client:** Uranium Energy Corp  
**Project:** Weesatche Baseline Sampling  
**Lab ID:** C07070563-004  
**Client Sample ID:** RBLB-4 DP

**Report Date:** 08/01/07  
**Collection Date:** 07/11/07 15:03  
**Date Received:** 07/12/07  
**Matrix:** Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Alkalinity, Total as CaCO <sub>3</sub>	266	mg/L		1		A2320 B	07/17/07 09:37 / ljl
Carbonate as CO <sub>3</sub>	ND	mg/L		1		A2320 B	07/17/07 09:37 / ljl
Bicarbonate as HCO <sub>3</sub>	325	mg/L		1		A2320 B	07/17/07 09:37 / ljl
Calcium	101	mg/L		0.5		E200.7	07/18/07 17:07 / ts
Chloride	150	mg/L		1		A4500-Cl B	07/13/07 18:07 / jl
Fluoride	0.7	mg/L		0.1		A4500-F C	07/13/07 14:24 / bas
Magnesium	20.2	mg/L		0.5		E200.7	07/18/07 17:07 / ts
Nitrogen, Ammonia as N	0.08	mg/L		0.05		A4500-NH3 G	07/18/07 10:41 / jal
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	07/13/07 13:19 / ljl
Potassium	7.1	mg/L		0.5		E200.7	07/18/07 17:07 / ts
Silica	32.0	mg/L		0.1		E200.7	07/18/07 17:07 / ts
Sodium	99.7	mg/L		0.5		E200.7	07/18/07 17:07 / ts
Sulfate	69	mg/L	D	2		A4500-SO4 E	07/13/07 12:57 / zd
<b>PHYSICAL PROPERTIES</b>							
Conductivity	1140	umhos/cm		1.0		A2510 B	07/13/07 14:56 / ml
pH	7.54	s.u.		0.01		A4500-H B	07/13/07 14:56 / ml
Solids, Total Dissolved TDS @ 180 C	666	mg/L		10		A2540 C	07/13/07 16:19 / ml
<b>METALS - DISSOLVED</b>							
Arsenic	0.004	mg/L		0.001		E200.8	07/17/07 05:17 / bws
Cadmium	ND	mg/L		0.01		E200.8	07/17/07 05:17 / bws
Iron	ND	mg/L		0.03		E200.7	07/18/07 17:07 / ts
Lead	ND	mg/L		0.05		E200.8	07/17/07 05:17 / bws
Manganese	ND	mg/L		0.01		E200.8	07/17/07 05:17 / bws
Mercury	ND	mg/L		0.001		E200.8	07/17/07 05:17 / bws
Molybdenum	ND	mg/L		0.1		E200.8	07/17/07 05:17 / bws
Selenium	0.001	mg/L		0.001		E200.8	07/17/07 05:17 / bws
Uranium	0.0060	mg/L		0.0003		E200.8	07/17/07 05:17 / bws
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	37.2	pCi/L		0.2		E903.0	07/23/07 14:02 / crw
Radium 226 precision (±)	2.1	pCi/L				E903.0	07/23/07 14:02 / crw
<b>DATA QUALITY</b>							
A/C Balance (± 5)	1.01	%				Calculation	07/19/07 17:09 / bws
Anions	11.0	meq/L				Calculation	07/19/07 17:09 / bws
Cations	11.2	meq/L				Calculation	07/19/07 17:09 / bws
Solids, Total Dissolved Calculated	639	mg/L				Calculation	07/19/07 17:09 / bws
TDS Balance (0.80 - 1.20)	1.04	dec. %				Calculation	07/19/07 17:09 / bws

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

MCL - Maximum contaminant level.  
 ND - Not detected at the reporting limit.

## LABORATORY ANALYTICAL REPORT

**Client:** Uranium Energy Corp  
**Project:** Weesatche Baseline Sampling  
**Lab ID:** C07070627-003  
**Client Sample ID:** RBLB-5

**Report Date:** 08/01/07  
**Collection Date:** 07/12/07 12:50  
**Date Received:** 07/13/07  
**Matrix:** Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Alkalinity, Total as CaCO <sub>3</sub>	279	mg/L		1		A2320 B	07/23/07 08:37 / bas
Carbonate as CO <sub>3</sub>	ND	mg/L		1		A2320 B	07/23/07 08:37 / bas
Bicarbonate as HCO <sub>3</sub>	340	mg/L		1		A2320 B	07/23/07 08:37 / bas
Calcium	88.2	mg/L		0.5		E200.7	07/26/07 15:46 / ts
Chloride	163	mg/L		1		A4500-Cl B	07/18/07 11:27 / jl
Fluoride	0.8	mg/L		0.1		A4500-F C	07/23/07 12:32 / bas
Magnesium	16.5	mg/L		0.5		E200.7	07/26/07 15:46 / ts
Nitrogen, Ammonia as N	0.06	mg/L		0.05		A4500-NH <sub>3</sub> G	07/17/07 15:34 / jl
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	07/16/07 15:52 / jal
Potassium	4.4	mg/L		0.5		E200.7	07/26/07 15:46 / ts
Silica	31.6	mg/L		0.1		E200.7	07/26/07 15:46 / ts
Sodium	93.8	mg/L		0.5		E200.7	07/26/07 15:46 / ts
Sulfate	9	mg/L		1		A4500-SO <sub>4</sub> E	07/17/07 11:16 / zd
<b>PHYSICAL PROPERTIES</b>							
Conductivity	1050	umhos/cm		1.0		A2510 B	07/16/07 14:58 / ml
pH	7.63	s.u.		0.01		A4500-H B	07/16/07 14:58 / ml
Solids, Total Dissolved TDS @ 180 C	584	mg/L		10		A2540 C	07/16/07 15:16 / ml
<b>METALS - DISSOLVED</b>							
Arsenic	0.009	mg/L		0.001		E200.8	07/28/07 03:11 / bws
Cadmium	ND	mg/L		0.01		E200.8	07/28/07 03:11 / bws
Iron	ND	mg/L		0.03		E200.7	07/26/07 15:46 / ts
Lead	ND	mg/L		0.05		E200.8	07/28/07 03:11 / bws
Manganese	0.02	mg/L		0.01		E200.8	07/28/07 03:11 / bws
Mercury	ND	mg/L		0.001		E200.8	07/28/07 03:11 / bws
Molybdenum	ND	mg/L		0.1		E200.8	07/28/07 03:11 / bws
Selenium	0.001	mg/L		0.001		E200.8	07/28/07 03:11 / bws
Uranium	0.0600	mg/L		0.0003		E200.8	07/28/07 03:11 / bws
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	1090	pCi/L		0.2		E903.0	07/24/07 16:15 / trs
Radium 226 precision (±)	9.6	pCi/L				E903.0	07/24/07 16:15 / trs
<b>DATA QUALITY</b>							
A/C Balance (± 5)	-2.12	%				Calculation	07/28/07 12:58 / bws
Anions	10.4	meq/L				Calculation	07/28/07 12:58 / bws
Cations	9.97	meq/L				Calculation	07/28/07 12:58 / bws
Solids, Total Dissolved Calculated	575	mg/L				Calculation	07/28/07 12:58 / bws
TDS Balance (0.80 - 1.20)	1.02	dec. %				Calculation	07/28/07 12:58 / bws

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

MCL - Maximum contaminant level.  
 ND - Not detected at the reporting limit.

## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company:	UEC	Report Date:	08/29/2008
Identification:	PAA-1	Work Order No.:	303433_002
Sample Id:	OMW-1	Lab Description:	M46-645
Laboratory:	Jordan Laboratories (A Xenco Laboratories Company)	Sample Date/Time:	5/7/2008 1330

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	125.00	6.24	324.35	51.43
MAGNESIUM (Mg)	15.30	1.26	58.63	10.37
SODIUM (Na)	105.00	4.57	223.34	37.66
POTASSIUM (K)	2.58	0.07	4.75	0.54

<b>TOTAL CATION</b>	<b>12.13</b>
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CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	307.0	5.03	219.36	44.22
SULFATE (SO <sub>4</sub> )	103.0	2.14	158.48	18.85
CHLORIDE (Cl)	149.0	4.20	319.02	36.94
NITRATE (NO <sub>3</sub> -N)	6.50			
FLUORIDE (F)	0.47			
SILICA (SiO <sub>2</sub> )	16.1			

<b>Total Conductance:</b>	<b>1307.92</b>
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<b>TOTAL ANION</b>	<b>11.38</b>
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<b>TOTAL ION</b>	<b>830</b>
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## ACCURACY CHECK

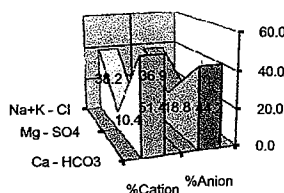
TDS (180 c)	673.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	676.5
EC (25 c)	1170.0 umhos/cm
EC (DIL) = 105.6 X 12.50 =	1320.0 umhos/cm
ALK. as CaCO <sub>3</sub>	252.0
pH	7.35 Std. Unit

		RANGE
ION	1.066	0.96 to 1.04
TDS	0.995	0.90 to 1.10
EC	1.009	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.021
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	0.002
MANGANESE (Mn)	0.007
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	0.024
SELENIUM (Se)	0.007
URANIUM (U)	0.006
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226	0.5 +/-	0.1
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
842 Cantwell Ln  
Corpus Christi, TX 78408

Remarks: Turbidity = 1.55 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity. Checked by:



# GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

<b>Company:</b>	UEC	<b>Report Date:</b>	08/29/2008
<b>Identification:</b>	PAA-1	<b>Work Order No.:</b>	303654_001
<b>Sample Id:</b>	OMW-2	<b>Lab Description:</b>	M46-653
<b>Laboratory:</b>	Jordan Laboratories (A Xenco Laboratories Company)	<b>Sample Date/Time:</b>	5/8/08 1030

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	212.00	10.58	550.10	59.45
MAGNESIUM (Mg)	23.60	1.94	90.44	10.91
SODIUM (Na)	120.00	5.22	255.24	29.33
POTASSIUM (K)	2.14	0.05	3.94	0.31

**TOTAL CATION** 17.79

CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	339.0	5.56	242.22	32.92
SULFATE (SO <sub>4</sub> )	167.0	3.48	256.95	20.60
CHLORIDE (Cl)	278.0	7.84	595.21	46.47
NITRATE (NO <sub>3</sub> -N)	5.60			
FLUORIDE (F)	0.39			
SILICA (SiO <sub>2</sub> )	18.7			

**Total Conductance:** 1994.10

**TOTAL ANION** 16.87

**TOTAL ION** 1166

## ACCURACY CHECK

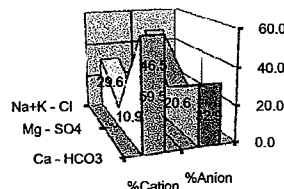
TDS (180 c) 1040.0  
TDS (total ion - 0.5 HCO<sub>3</sub>) 996.9  
EC (25 c) 1690.0 umhos/cm  
EC (DIL) = 99.5 X 20.00 = 1990.0 umhos/cm  
ALK. as CaCO<sub>3</sub> 278.0  
pH 7.21 Std. Unit

		<u>RANGE</u>
ION	1.054	0.96 to 1.04
TDS	1.043	0.90 to 1.10
EC	0.998	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.018
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.003
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	0.010
URANIUM (U)	0.008
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226 0.9 +/- 0.1  
RADON 222 +/-

NOTE: QC documentation is on file at Jordan Labs  
842 Cantwell Ln  
Corpus Christi, TX 78408

Remarks: Turbidity = 1.42 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity Checked by:

# GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company:	UEC	Report Date:	08/29/2008
Identification:	PAA-1	Work Order No.:	303433_001
Sample Id:	OMW-3	Lab Description:	M46-644
Laboratory:	Jordan Laboratories (A Xenco Laboratories Company)	Sample Date/Time:	5/7/08 1155

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	140.00	6.99	363.27	56.68
MAGNESIUM (Mg)	16.20	1.33	62.08	10.81
SODIUM (Na)	91.00	3.96	193.56	32.12
POTASSIUM (K)	1.88	0.05	3.46	0.39

**TOTAL CATION** 12.32

CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	351.0	5.75	250.80	47.46
SULFATE (SO <sub>4</sub> )	108.0	2.25	166.17	18.55
CHLORIDE (Cl)	146.0	4.12	312.59	33.98
NITRATE (NO <sub>3</sub> -N)	3.90			
FLUORIDE (F)	0.51			
SILICA (SiO <sub>2</sub> )	18.4			

**Total Conductance:** 1351.94

**TOTAL ANION** 12.12

**TOTAL ION** 877

## ACCURACY CHECK

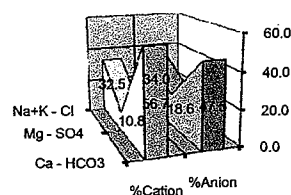
TDS (180 c)	748.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	701.4
EC (25 c)	1190.0 umhos/cm
EC (DIL) = 109.6 X 12.50 =	1370.0 umhos/cm
ALK. as CaCO <sub>3</sub>	288.0
pH	7.31 Std. Unit

		RANGE
ION	1.017	0.96 to 1.04
TDS	1.066	0.90 to 1.10
EC	1.013	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.013
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	<0.002
MANGANESE (Mn)	<0.003
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	0.010
URANIUM (U)	0.009
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226	0.8 +/-	0.1
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
842 Cantwell Ln  
Corpus Christi, TX 78408

Remarks: Turbidity = <1.00 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity. Checked by:

# GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

<b>Company:</b>	UEC	<b>Report Date:</b>	08/29/2008
<b>Identification:</b>	PAA-1 Baseline	<b>Work Order No.:</b>	303693_002
<b>Sample Id:</b>	OMW-4	<b>Lab Description:</b>	M46-660
<b>Laboratory:</b>	Jordan Laboratories (A Xenco Laboratories Company)	<b>Sample Date/Time:</b>	5/12/08 1235

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	250.00	12.48	648.70	62.22
MAGNESIUM (Mg)	29.00	2.38	111.13	11.89
SODIUM (Na)	118.00	5.13	250.99	25.60
POTASSIUM (K)	2.29	0.06	4.22	0.29

**TOTAL CATION** 20.05

CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	342.0	5.60	244.37	28.36
SULFATE (SO <sub>4</sub> )	168.0	3.50	258.49	17.70
CHLORIDE (Cl)	378.0	10.66	809.31	53.95
NITRATE (NO <sub>3</sub> -N)	7.60			
FLUORIDE (F)	0.36			
SILICA (SiO <sub>2</sub> )	21.4			

**Total Conductance:** 2327.21

**TOTAL ANION** 19.77

**TOTAL ION** 1317

## ACCURACY CHECK

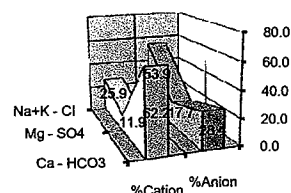
TDS (180 c) 1180.0  
TDS (total ion - 0.5 HCO<sub>3</sub>) 1145.7  
EC (25 c) 1940.0 umhos/cm  
EC (DIL) = 114.0 X 20.00 = 2280.0 umhos/cm  
ALK. as CaCO<sub>3</sub> 280.0  
pH 7.23 Std. Unit

ION	<u>1.014</u>	<u>RANGE</u>
TDS	<u>1.030</u>	0.96 to 1.04
EC	<u>0.980</u>	0.90 to 1.10
		0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.019
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.008
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	0.009
URANIUM (U)	0.013
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226 6.0 +/- 0.2  
RADON 222  +/-

NOTE: QC documentation is on file at Jordan Labs  
842 Cantwell Ln  
Corpus Christi, TX 78408

Remarks: Turbidity = 6.96 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity. Checked by:

# GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company:	UEC	Report Date:	08/29/2008
Identification:	PAA-1 Baseline	Work Order No.:	303693_004
Sample Id:	OMW-5	Lab Description:	M46-662
Laboratory:	Jordan Laboratories (A Xenco Laboratories Company)	Sample Date/Time:	5/12/08 1520

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	130.00	6.49	337.33	55.48
MAGNESIUM (Mg)	12.50	1.03	47.90	8.79
SODIUM (Na)	95.00	4.13	202.07	35.34
POTASSIUM (K)	1.78	0.05	3.28	0.39

**TOTAL CATION** 11.69

CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	346.0	5.67	247.22	50.04
SULFATE (SO <sub>4</sub> )	47.0	0.98	72.32	8.64
CHLORIDE (Cl)	166.0	4.68	355.41	41.32
NITRATE (NO <sub>3</sub> -N)	4.20			
FLUORIDE (F)	0.51			
SILICA (SiO <sub>2</sub> )	18.8			

**Total Conductance:** 1265.52

**TOTAL ANION** 11.33

**TOTAL ION** 822

## ACCURACY CHECK

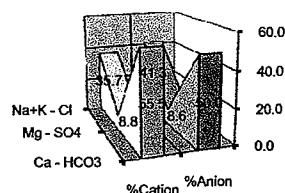
TDS (180 c)	663.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	648.8
EC (25 c)	1150.0 umhos/cm
EC (DIL) = 103.2 X 12.50 =	1290.0 umhos/cm
ALK. as CaCO <sub>3</sub>	284.0
pH	7.30 Std. Unit

	ION	RANGE
	1.032	0.96 to 1.04
	1.022	0.90 to 1.10
	1.019	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.010
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	0.003
MANGANESE (Mn)	<0.003
MERCURY (Hg)	<0.004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	<0.003
URANIUM (U)	0.008
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226	3.6 +/-	0.2
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
842 Cantwell Ln  
Corpus Christi, TX 78408

Remarks: Turbidity = <1.00 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity. Checked by:

## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company: UEC  
 Identification: PAA-1 Baseline  
 Sample Id: OMW-6  
 Laboratory: Jordan Laboratories (A Xenco Laboratories Company)

Report Date: 08/29/2008  
 Work Order No.: 303731\_001  
 Lab Description: M46-667  
 Sample Date/Time: 5/12/08 1745

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	310.00	15.47	804.39	64.49
MAGNESIUM (Mg)	32.40	2.66	124.16	11.11
SODIUM (Na)	133.00	5.79	282.89	24.12
POTASSIUM (K)	2.60	0.07	4.79	0.28
<b>TOTAL CATION</b>		<b>23.99</b>		
CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	299.0	4.90	213.64	21.27
SULFATE (SO <sub>4</sub> )	80.0	1.67	123.09	7.23
CHLORIDE (Cl)	584.0	16.47	1250.37	71.50
NITRATE (NO <sub>3</sub> -N)	8.20			
FLUORIDE (F)	0.37			
SILICA (SiO <sub>2</sub> )	20.3			
<b>TOTAL ANION</b>		<b>23.04</b>		
<b>TOTAL ION</b>		<b>1470</b>		

**Total Conductance: 2803.34**

## ACCURACY CHECK

			<u>RANGE</u>		
TDS (180 c)		1340.0	ION	1.041	0.96 to 1.04
TDS (total ion - 0.5 HCO3)		1320.4	TDS	1.015	0.90 to 1.10
EC (25 c)		2450.0 umhos/cm	EC	1.020	0.95 to 1.05
EC (DIL) =	100.1	X 28.57 =			
ALK. as CaCO3		245.0			
pH		6.98 Std. Unit			

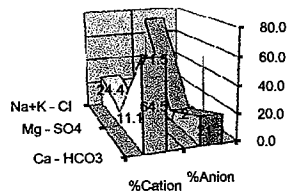
%Cations	%Anions
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## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.026
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.011
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	0.013
SELENIUM (Se)	0.012
URANIUM (U)	0.014
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations

## %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226	2.0 +/-	0.1
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
 842 Cantwell Ln  
 Corpus Christi, TX 78408

Remarks: Turbidity = <1.00 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity. Checked by:

## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company:	UEC	Report Date:	08/29/2008
Identification:	PAA-1	Work Order No.:	303654_002
Sample Id:	OMW-7	Lab Description:	M46-654
Laboratory:	Jordan Laboratories (A Xenco Laboratories Company)	Sample Date/Time:	5/8/08 1345

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	114.00	5.69	295.81	56.21
MAGNESIUM (Mg)	9.22	0.76	35.33	7.49
SODIUM (Na)	83.40	3.63	177.39	35.84
POTASSIUM (K)	1.82	0.05	3.35	0.46

<b>TOTAL CATION</b>	<b>10.12</b>
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CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	307.0	5.03	219.36	48.54
SULFATE (SO <sub>4</sub> )	53.0	1.10	81.55	10.65
CHLORIDE (Cl)	150.0	4.23	321.16	40.82
NITRATE (NO <sub>3</sub> -N)	1.90			
FLUORIDE (F)	0.62			
SILICA (SiO <sub>2</sub> )	17.6			

<b>Total Conductance:</b>	<b>1133.95</b>
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<b>TOTAL ANION</b>	<b>10.37</b>
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<b>TOTAL ION</b>	<b>739</b>
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## ACCURACY CHECK

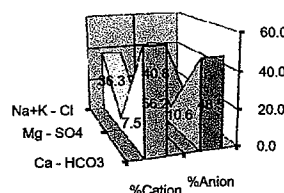
TDS (180 c)	615.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	585.1
EC (25 c)	1040.0 umhos/cm
EC (DIL) = 102.6 X 11.1 =	1139.9 umhos/cm
ALK. as CaCO <sub>3</sub>	252.0
pH	7.39 Std. Unit

		RANGE
ION	0.976	0.96 to 1.04
TDS	1.051	0.90 to 1.10
EC	1.005	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.014
CADMIUM (Cd)	0.001
IRON (Fe)	<0.030
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.006
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	<0.003
URANIUM (U)	0.008
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226	0.8 +/-	0.1
RADON 222	+/-	

NOTE: QC documentation is on file at Jordan Labs  
842 Cantwell Ln  
Corpus Christi, TX 78408

Remarks: Turbidity = 4.28 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity. Checked by:

## GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

Company: UEC  
 Identification: PAA-1 Baseline  
 Sample Id: OMW-8  
 Laboratory: Jordan Laboratories (A Xenco Laboratories Company)

Report Date: 08/29/2008  
 Work Order No.: 303655\_004  
 Lab Description: M46-658  
 Sample Date/Time: 5/8/08 1905

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	170.00	8.48	441.12	55.11
MAGNESIUM (Mg)	14.00	1.15	53.65	7.48
SODIUM (Na)	131.00	5.70	278.64	37.02
POTASSIUM (K)	2.34	0.06	4.31	0.39

**TOTAL CATION** 15.39

CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	370.0	6.06	264.37	41.15
SULFATE (SO <sub>4</sub> )	86.0	1.79	132.32	12.15
CHLORIDE (Cl)	244.0	6.88	522.41	46.70
NITRATE (NO <sub>3</sub> -N)	4.00			
FLUORIDE (F)	0.47			
SILICA (SiO <sub>2</sub> )	17.3			

**Total Conductance:** 1696.83

**TOTAL ANION** 14.74

**TOTAL ION** 1039

## ACCURACY CHECK

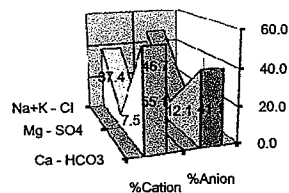
TDS (180 c) 955.0  
 TDS (total ion - 0.5 HCO<sub>3</sub>) 854.1  
 EC (25 c) 1480.0 umhos/cm  
 EC (DIL) = 101.4 X 16.67 = 1690.3 umhos/cm  
 ALK. as CaCO<sub>3</sub> 303.0  
 pH 7.19 Std. Unit

**RANGE**  
 ION 1.044 0.96 to 1.04  
 TDS 1.118 0.90 to 1.10  
 EC 0.996 0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.031
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.015
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	0.006
URANIUM (U)	0.009
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226 4.8 +/- 0.2  
 RADON 222 +/-

NOTE: QC documentation is on file at Jordan Labs  
 842 Cantwell Ln  
 Corpus Christi, TX 78408

Remarks: Turbidity = 11.9 NTU Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity. Checked by:

# GROUND WATER ANALYSIS REPORT - IN SITU URANIUM MINING

<b>Company:</b>	UEC	<b>Report Date:</b>	08/29/2008
<b>Identification:</b>	PAA-1 Baseline	<b>Work Order No.:</b>	303655_002
<b>Sample Id:</b>	OMW-9	<b>Lab Description:</b>	M46-656
<b>Laboratory:</b>	Jordan Laboratories (A Xenco Laboratories Company)	<b>Sample Date/Time:</b>	5/8/08 1640

## MAJOR AND SECONDARY CONSTITUENTS (Group 1)

ITEM	mg/L	epm	Conductance	%epm
CALCIUM (Ca)	208.00	10.38	539.72	62.66
MAGNESIUM (Mg)	16.40	1.35	62.85	8.14
SODIUM (Na)	110.00	4.78	233.97	28.88
POTASSIUM (K)	2.05	0.05	3.77	0.32

**TOTAL CATION** 16.57

CARBONATE (CO <sub>3</sub> )	0.0	0.00	0.00	0.00
BICARBONATE (HCO <sub>3</sub> )	316.0	5.18	225.79	34.13
SULFATE (SO <sub>4</sub> )	79.0	1.64	121.55	10.84
CHLORIDE (Cl)	296.0	8.35	633.75	55.03
NITRATE (NO <sub>3</sub> -N)	5.40			
FLUORIDE (F)	0.36			
SILICA (SiO <sub>2</sub> )	16.2			

**Total Conductance:** 1821.40

**TOTAL ANION** 15.17

**TOTAL ION** 1049

## ACCURACY CHECK

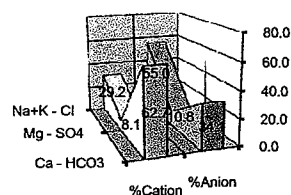
TDS (180 c)	925.0
TDS (total ion - 0.5 HCO <sub>3</sub> )	891.4
EC (25 c)	1570.0 umhos/cm
EC (DIL) = <u>107.4</u> X <u>16.67</u> =	1790.4 umhos/cm
ALK. as CaCO <sub>3</sub>	259.0
pH	7.24 Std. Unit

		RANGE
ION	<u>1.092</u>	0.96 to 1.04
TDS	<u>1.038</u>	0.90 to 1.10
EC	<u>0.983</u>	0.95 to 1.05

## MINOR and TRACE CONSTITUENTS (Group 2)

ITEM	mg/L
ARSENIC (As)	0.012
CADMIUM (Cd)	<0.001
IRON (Fe)	<0.030
LEAD (Pb)	<0.002
MANGANESE (Mn)	0.088
MERCURY (Hg)	<0.0004
MOLYBDENUM (Mo)	<0.010
SELENIUM (Se)	0.005
URANIUM (U)	0.007
AMMONIA-N (NH <sub>3</sub> -N)	<0.1

## %Cations %Anions



## RADIATION-PICOCURIES/LITER

RADIUM 226	<u>1.4</u> +/-	<u>0.1</u>
RADON 222	<u></u> +/-	<u></u>

NOTE: QC documentation is on file at Jordan Labs  
842 Cantwell Ln  
Corpus Christi, TX 78408

Remarks: Turbidity = 7.33 Note: Samples are reduced and contain H<sub>2</sub>S that can lead to a significant increase in turbidity.

Checked by:



## **APPENDIX B**

### **MAPS/CROSS-SECTIONS**







**A**

**A'**

32201-BMW-6      32201-N53      32201-N55      32201-N220      32201-N211      32201-BMW-14

○ — 555 FT — ○ — 216 FT — ○ — 212 FT — ○ — 102 FT — ○ — 544 FT — ○

TD 193 FT GL 234.5 FT      TD 283 FT GL 231.5 FT      TD 297 FT GL 232.4 FT      TD 314 FT GL 231.8 FT      TD 300 FT GL 231.7 FT      TD 206 FT GL 232.5 FT

200 FT  
150 FT  
100 FT  
50 FT  
Mean Sea Level  
-50 FT

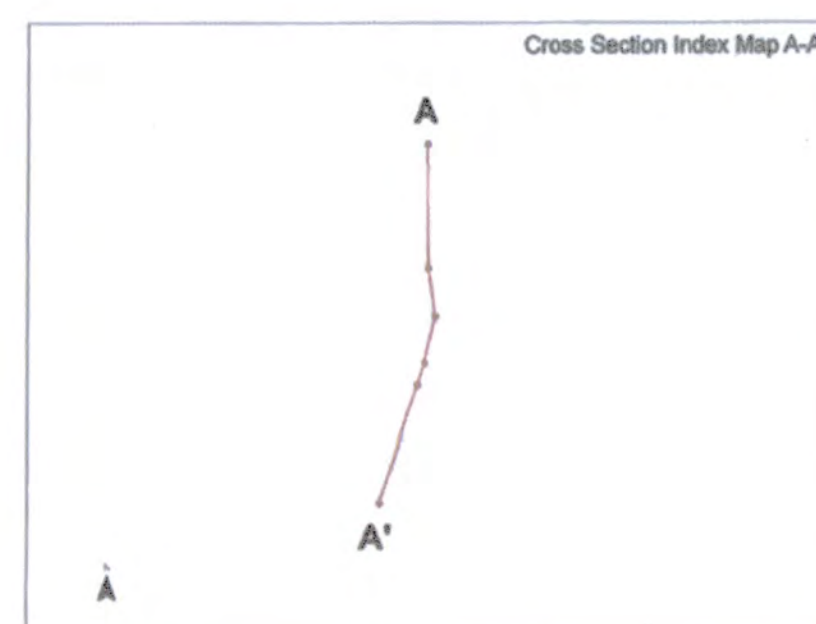
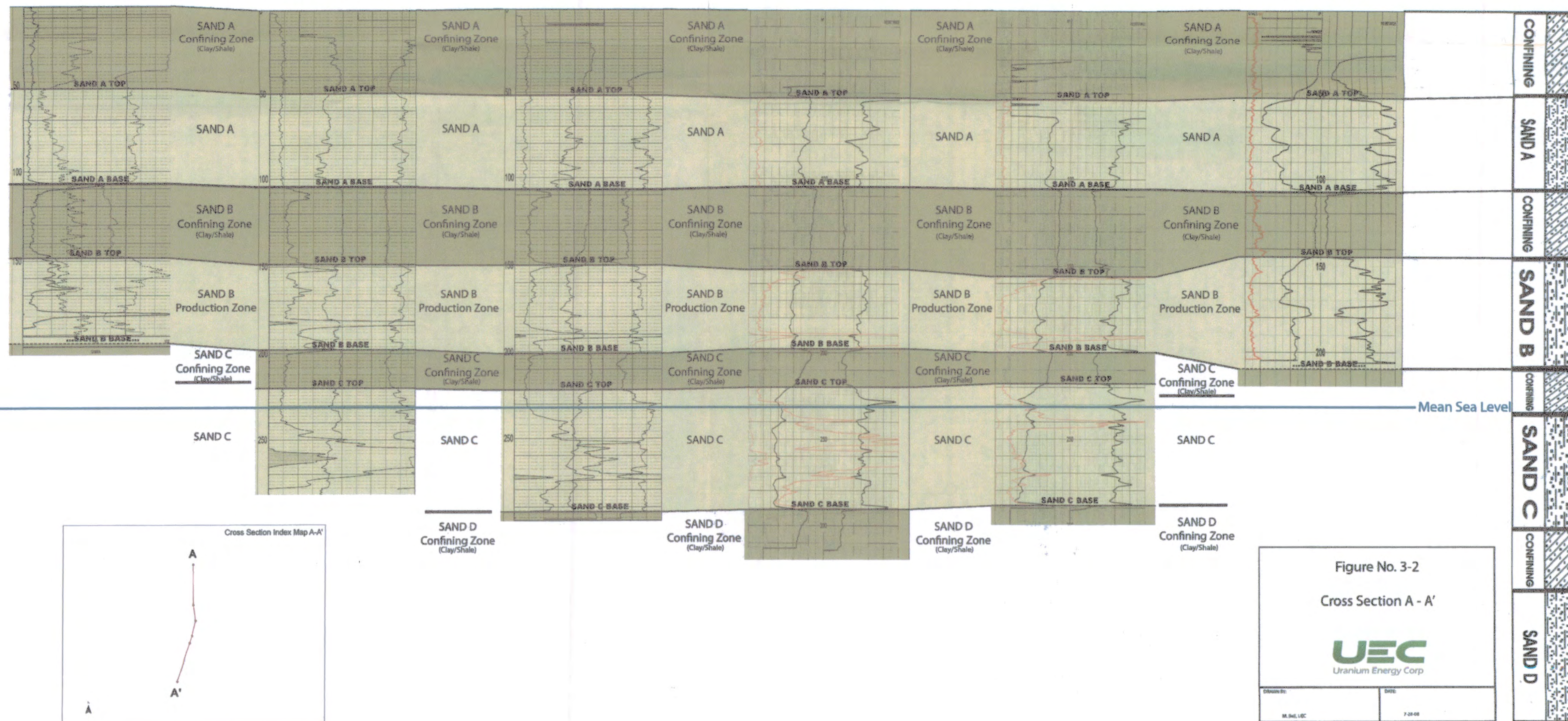


Figure No. 3-2  
Cross Section A - A'

**UEC**  
Uranium Energy Corp

Drawn By:	DATE:
M. SUE UEC	7-20-08
DRAWING NO:	SCALE:
UEC PERMIT CROSS SECTION A-A'	See Scale Bar

TD = Total Depth  
GL = Ground Level  
FT = Feet

50  
25  
0



B

32201-BMW-4      32201-N251      32201-N212      32201-N119      32201-RBLB-5      32201-N129      32201-N82      32201-N83      32201-N84      32201-80      32201-BMW-16

— 374 FT —      — 100 FT —      — 210 FT —      — 198 FT —      — 181 FT —      — 281 FT —      — 102 FT —      — 99 FT —      — 323 FT —      — 197 FT —

TD 187 FT  
GL 233.5 FT

TD 301 FT  
GL 234.3 FT

TD 300 FT  
GL 233.8 FT

TD 213 FT  
GL 232.7 FT

TD 220 FT  
GL 232.0 FT

TD 218 FT  
GL 232.0 FT

TD 311 FT  
GL 231.3 FT

TD 305 FT  
GL 230.5 FT

TD 304 FT  
GL 229.8 FT

TD 424 FT  
GL 231.9 FT

TD 195 FT  
GL 230.6 FT

B'

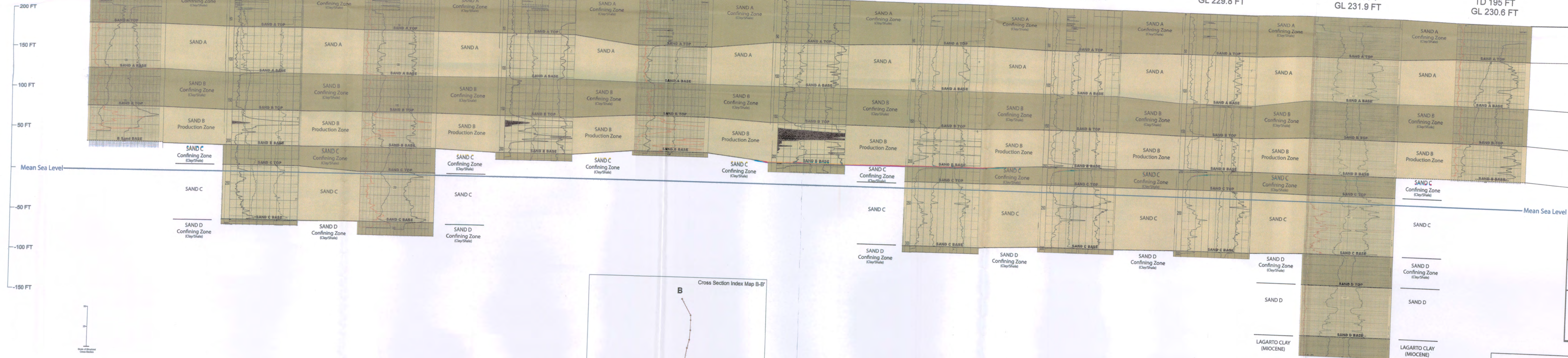
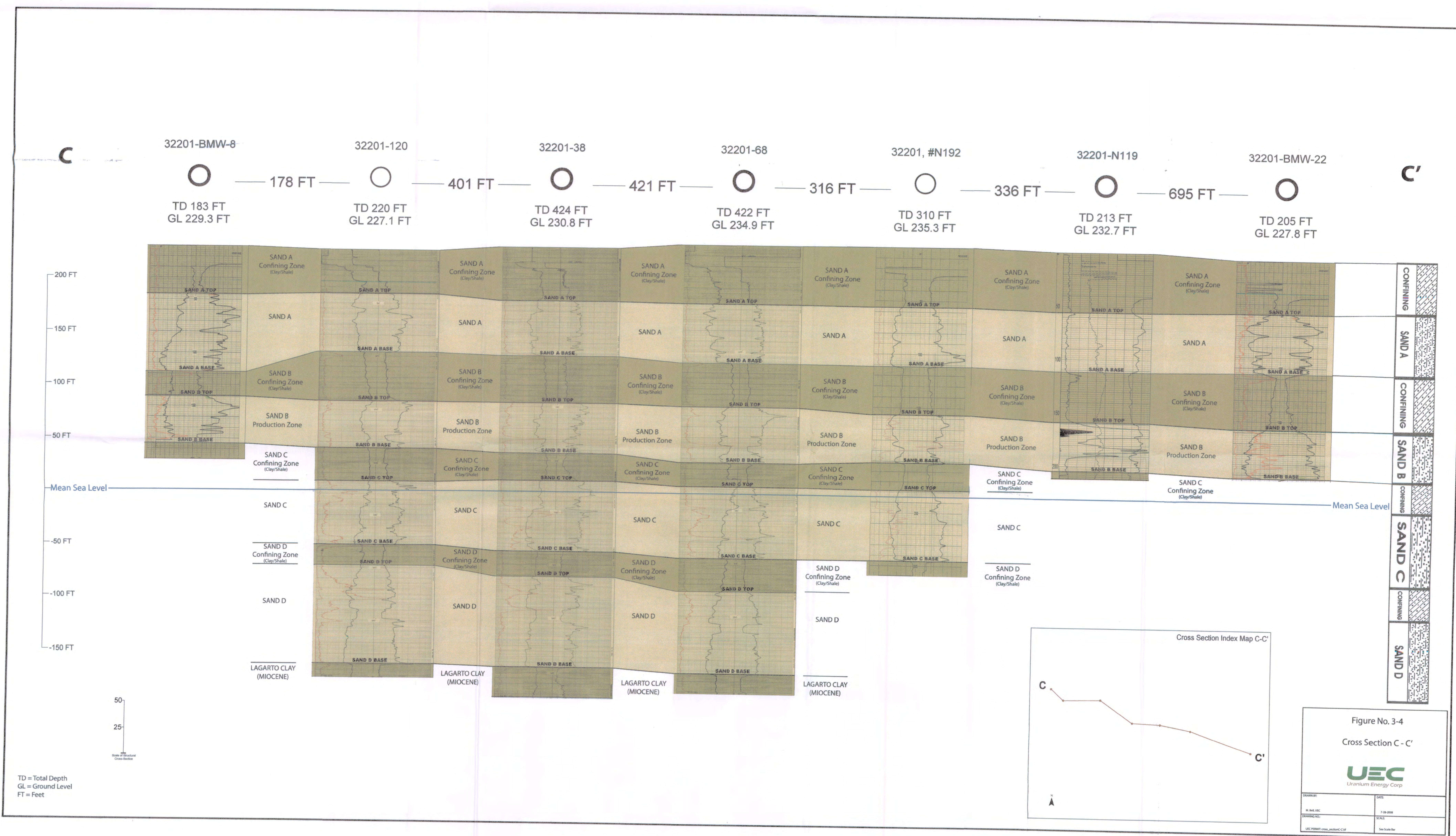


Figure No. 3-3  
Cross Section B - B'

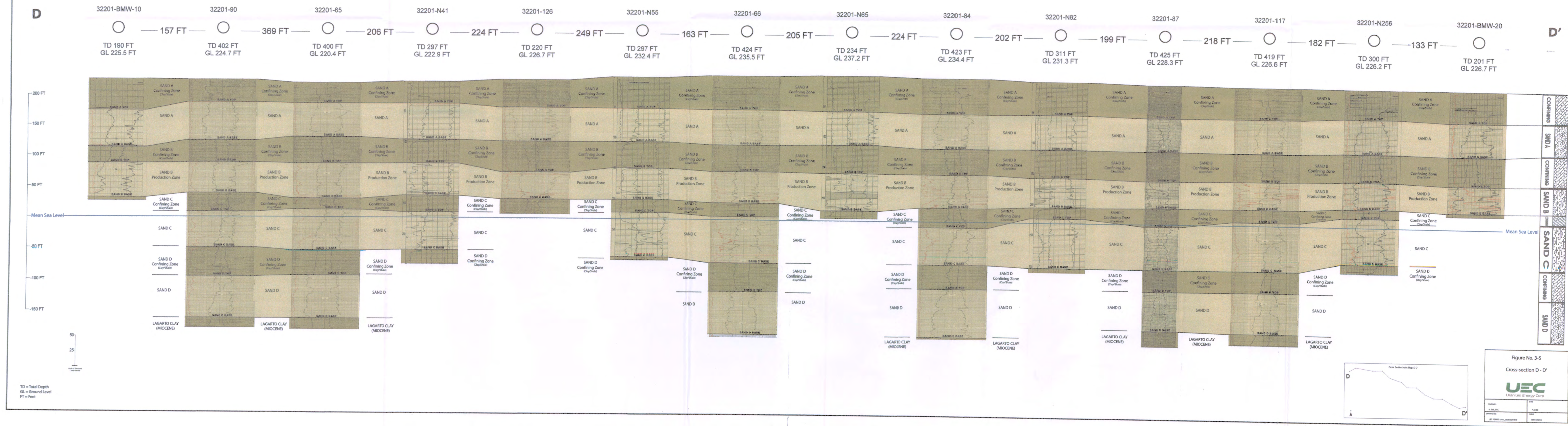
U.E.C.  
Uranium Energy Corp.

DESIGNED BY	DATE
DRAWN BY	7-2004
CHECKED BY	SCALE
FILE NAME: 32201-BMW-4_B-B'	See Scale for











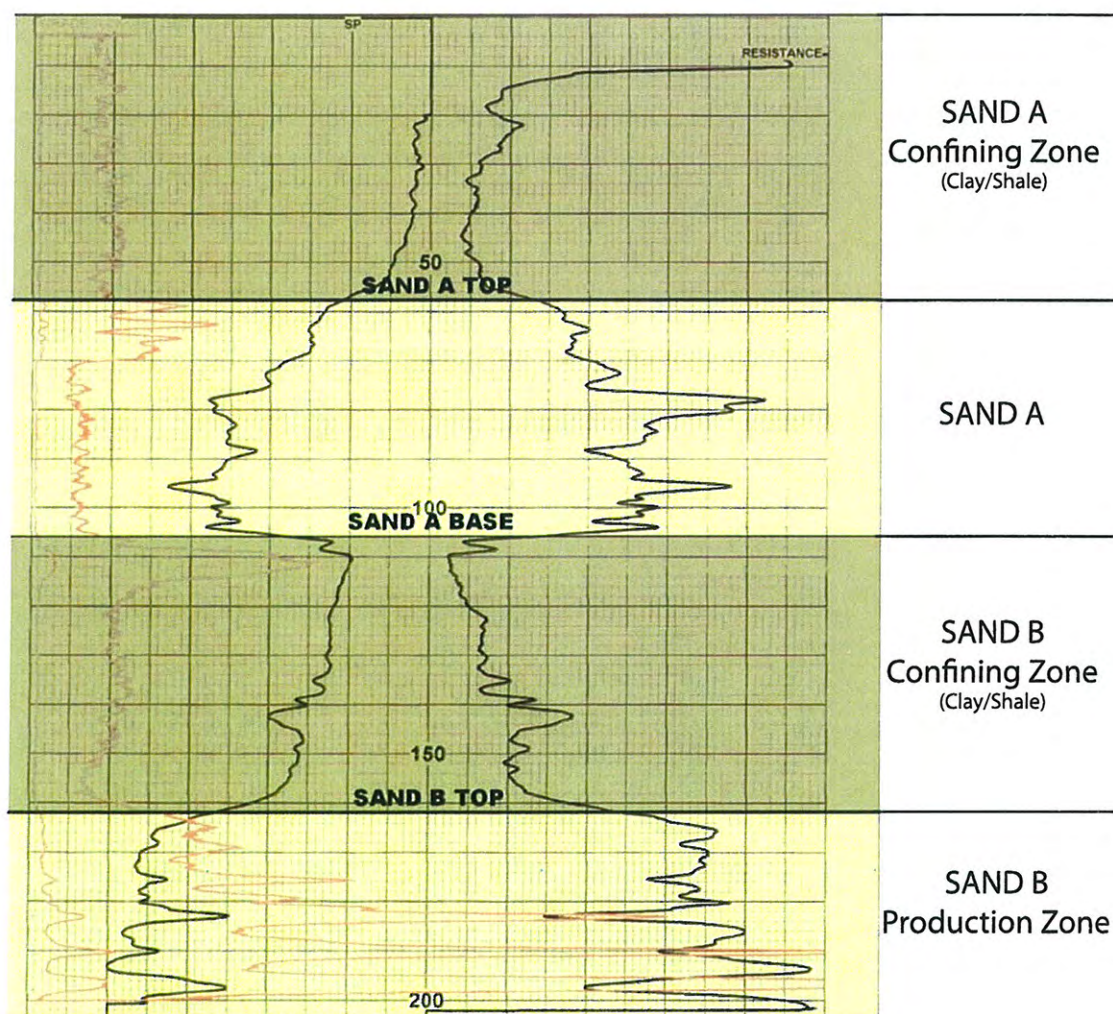
## **APPENDIX C**

### **WELL LOGS/COMPLETIONS REPORTS**

32201-BMW-1



TD 202 FT  
GL 228.5 FT

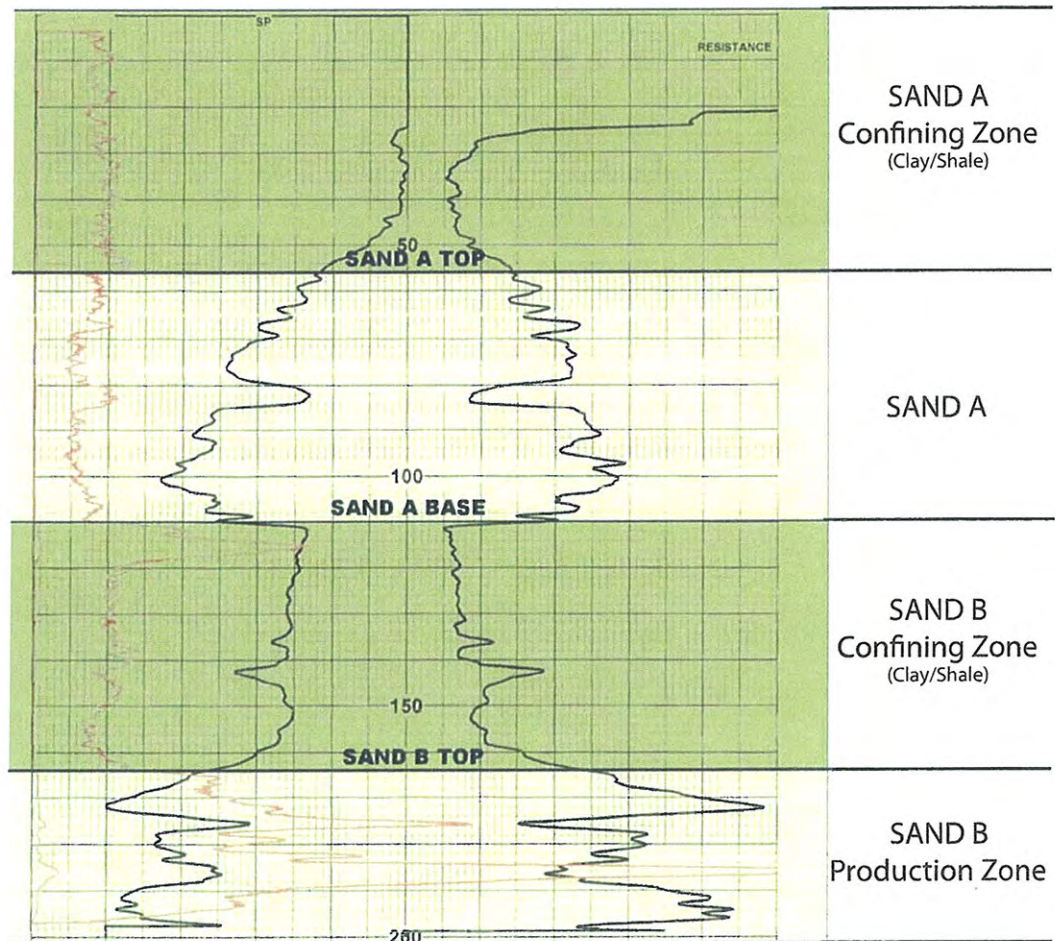




32201-BMW-2



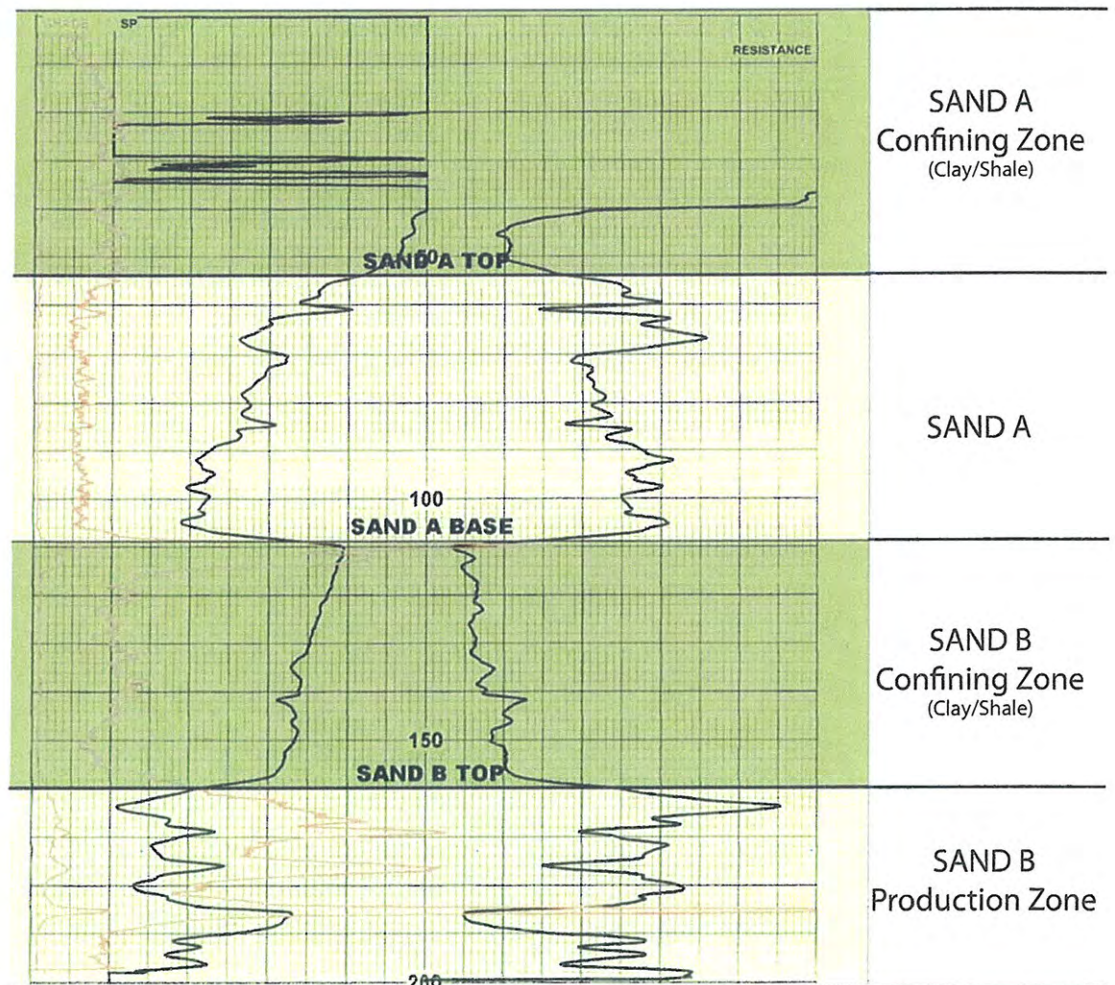
TD 199 FT  
GL 228.9 FT



32201-BMW-3



TD 200 FT  
GL 229.0 FT

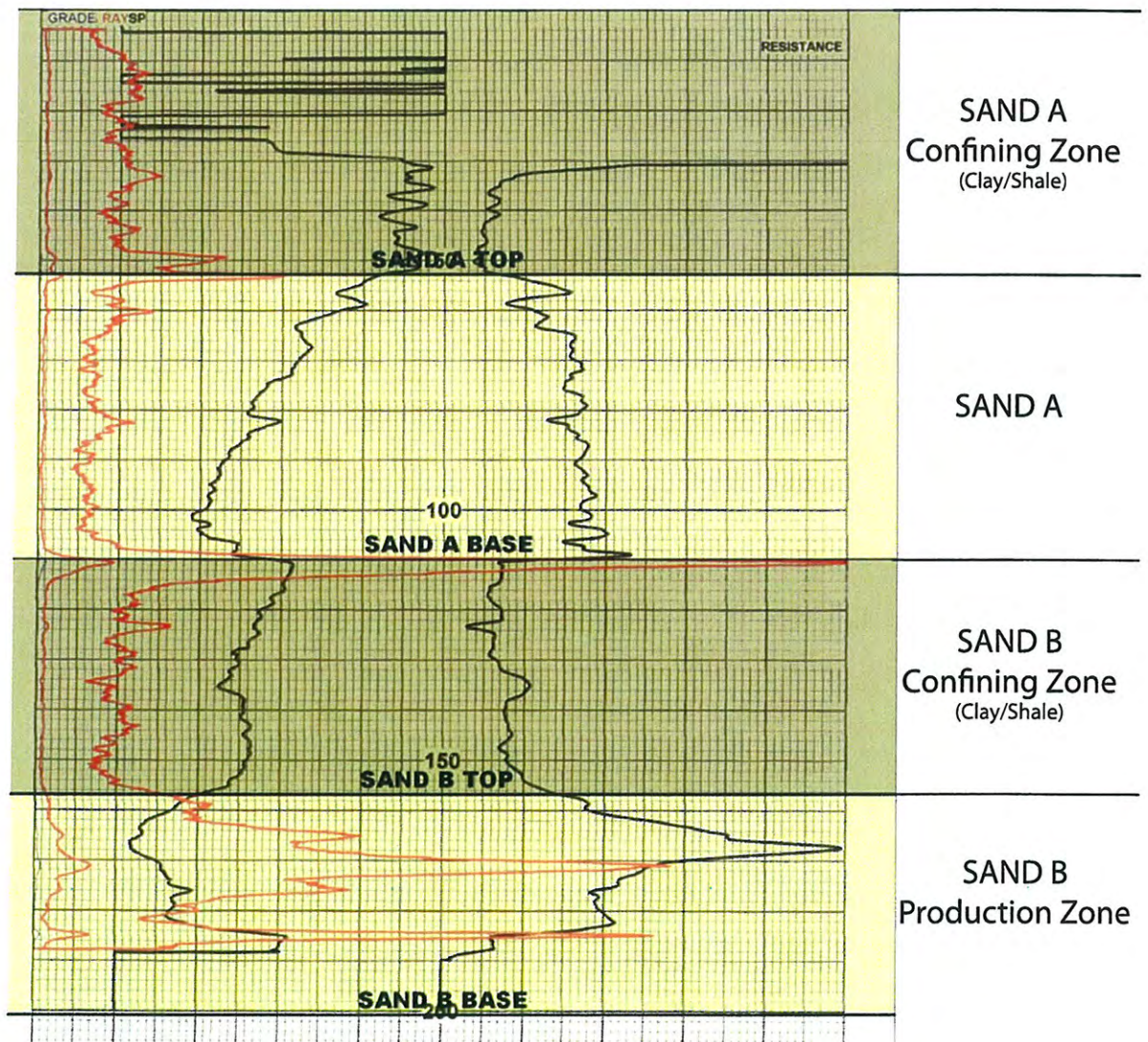




32201-BMW-4



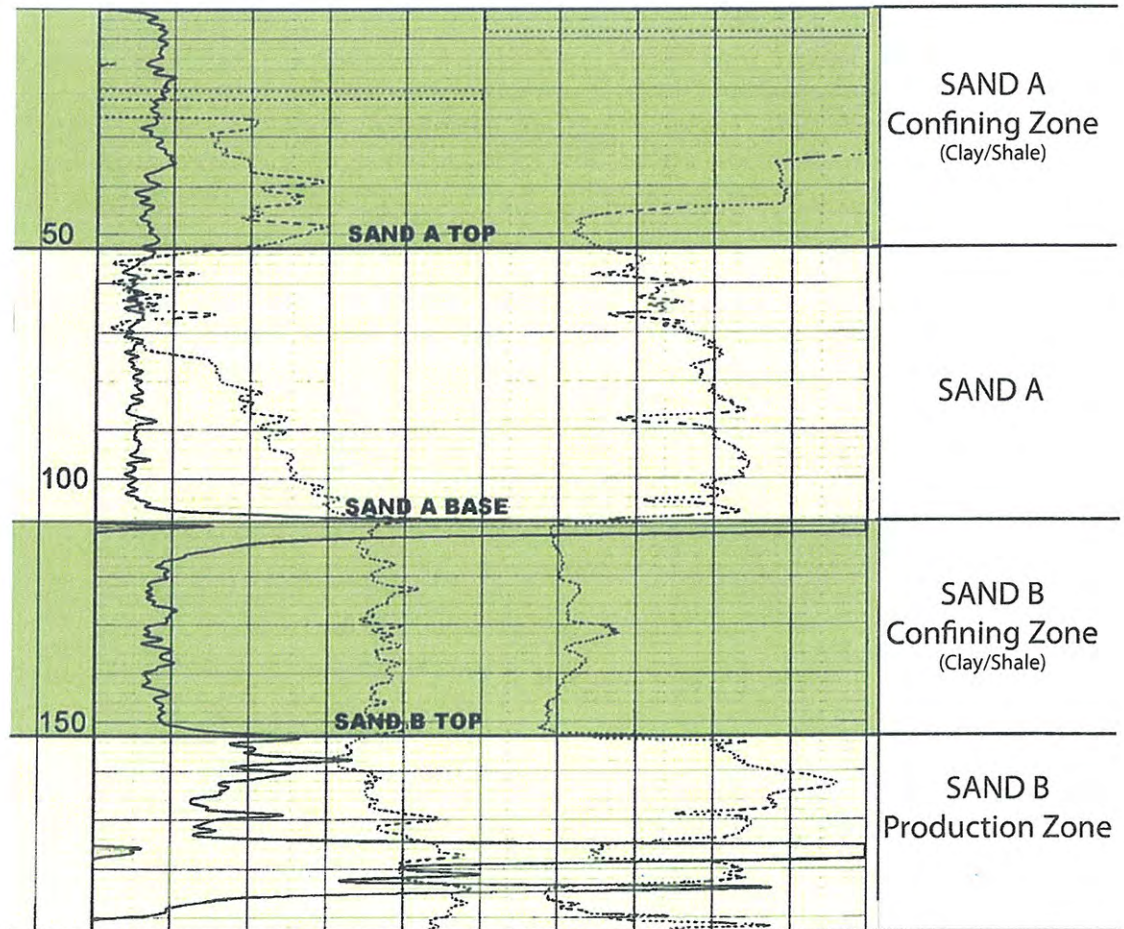
TD 187 FT  
GL 233.5 FT



32201-BMW-5



TD 195 FT  
GL 236.1 FT

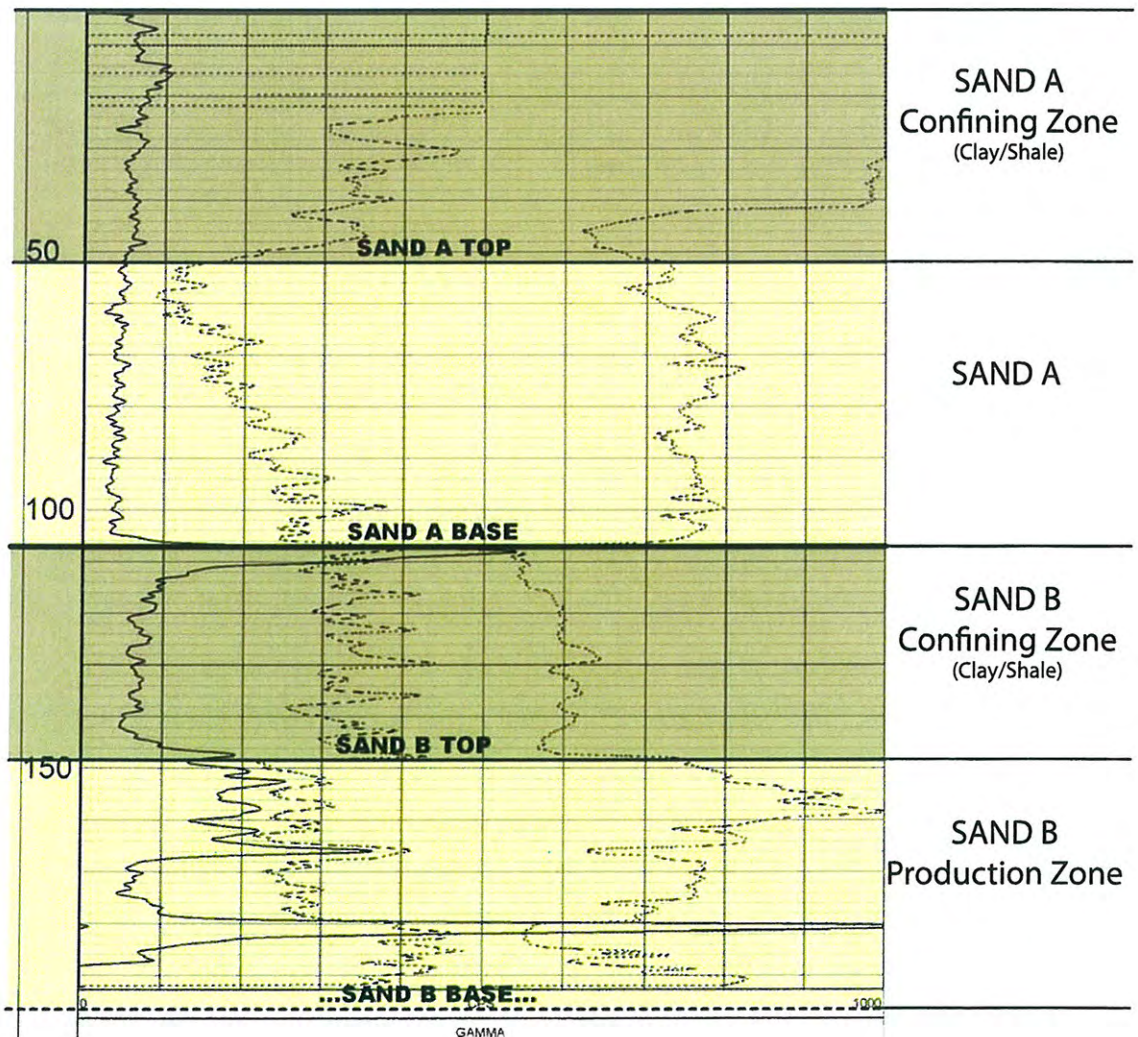




32201-BMW-6



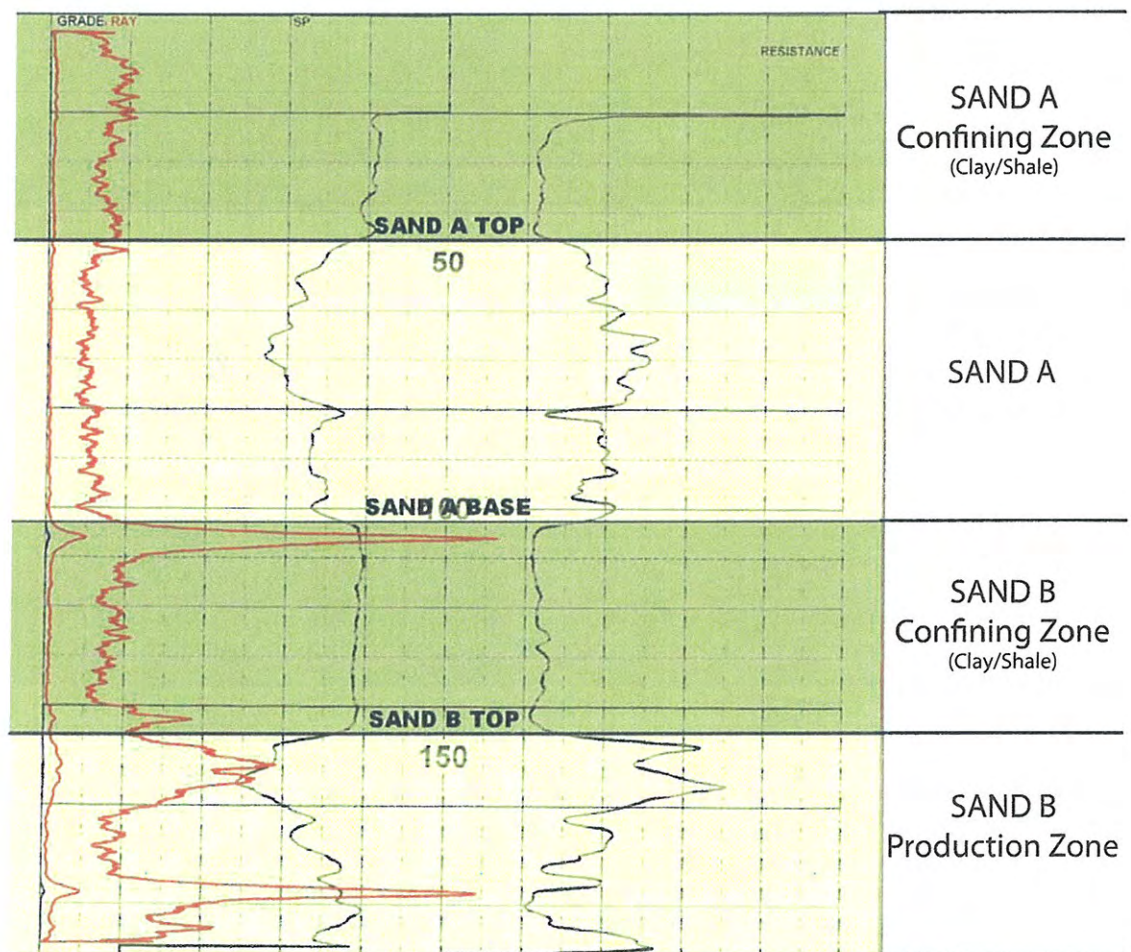
TD 193 FT  
GL 234.5 FT



32201-BMW-7



TD 190 FT  
GL 236.8 FT

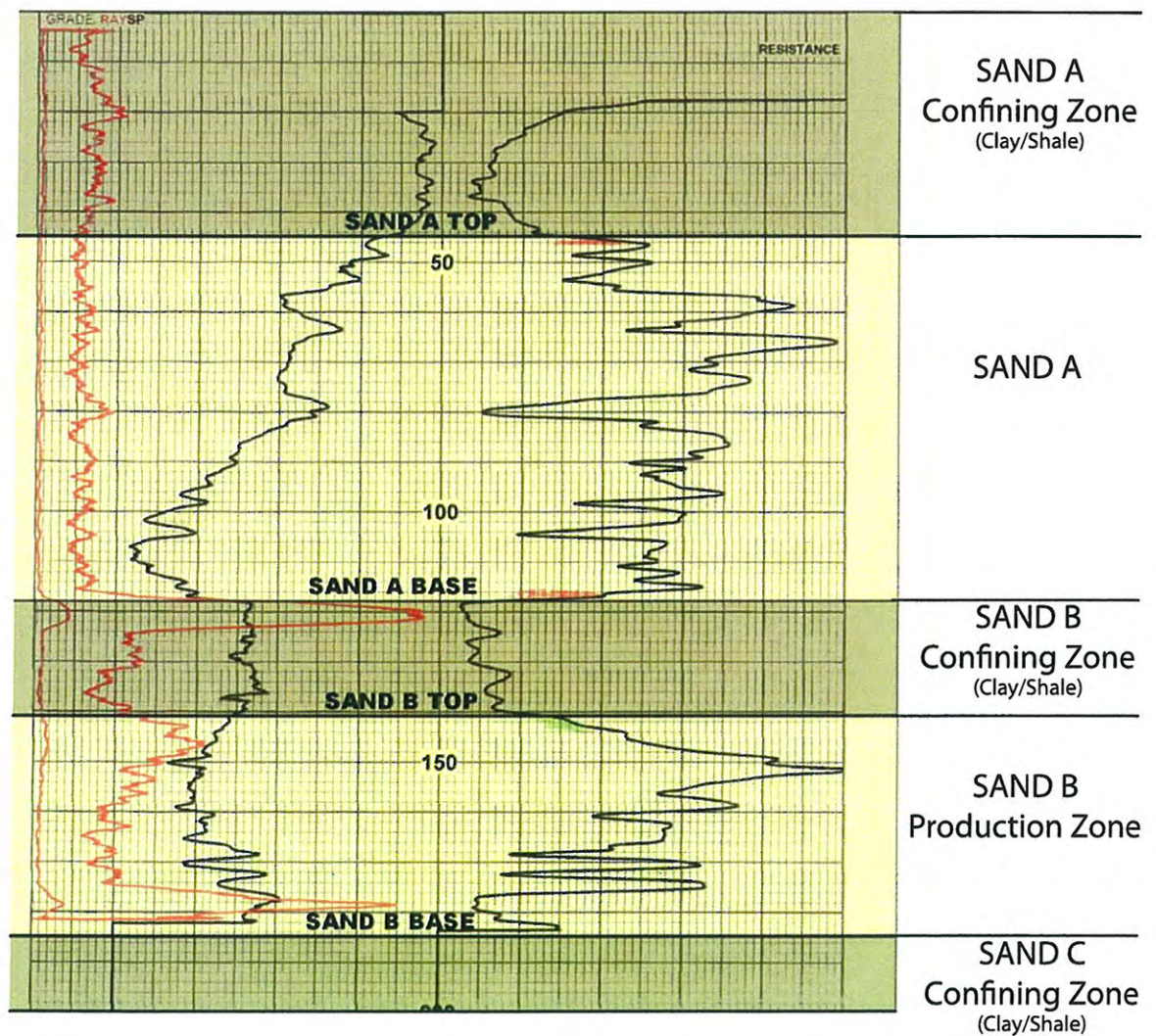




32201-BMW-8



TD 183 FT  
GL 229.3 FT

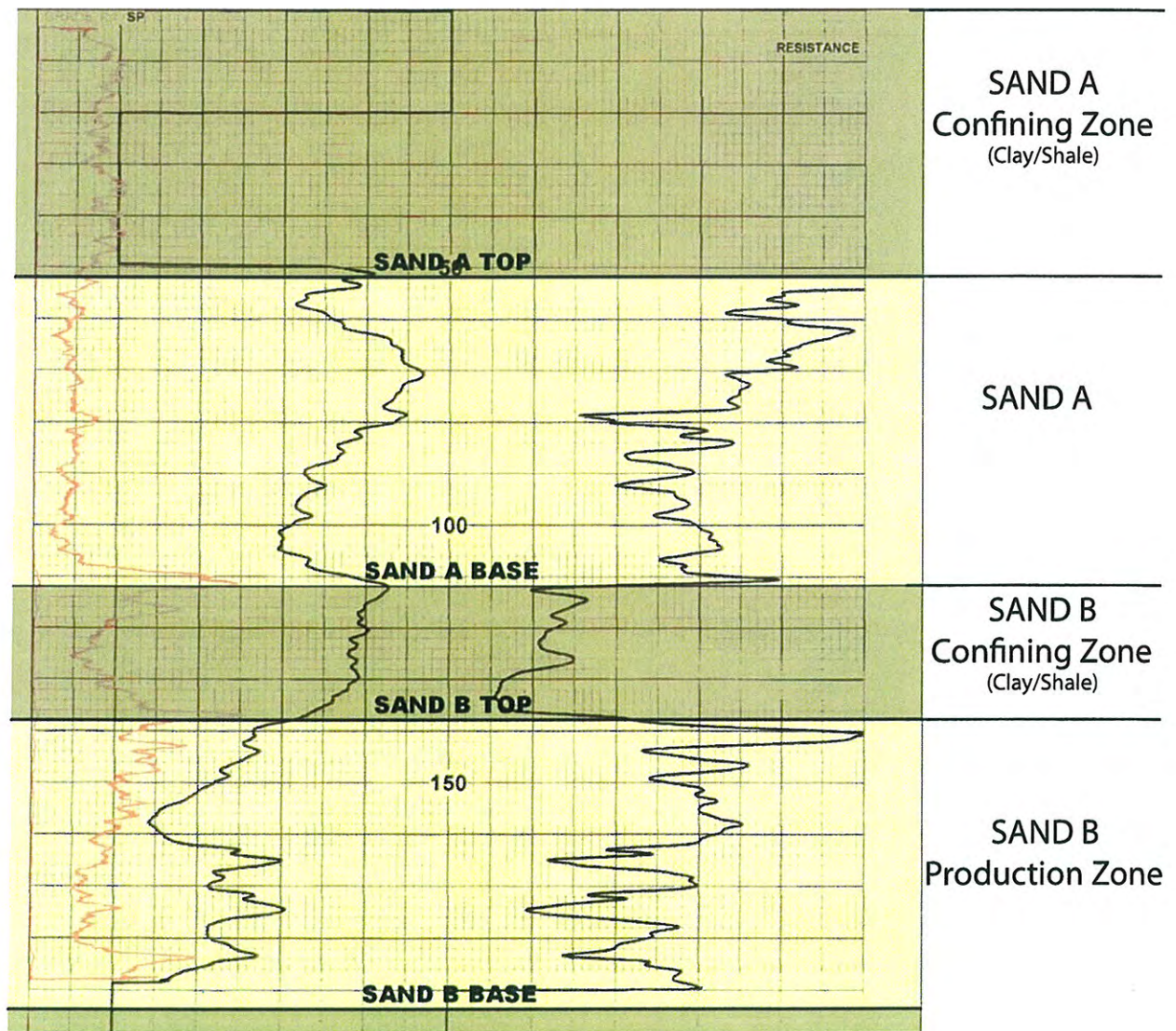




32201-BMW-10



TD 190 FT  
GL 225.5 FT

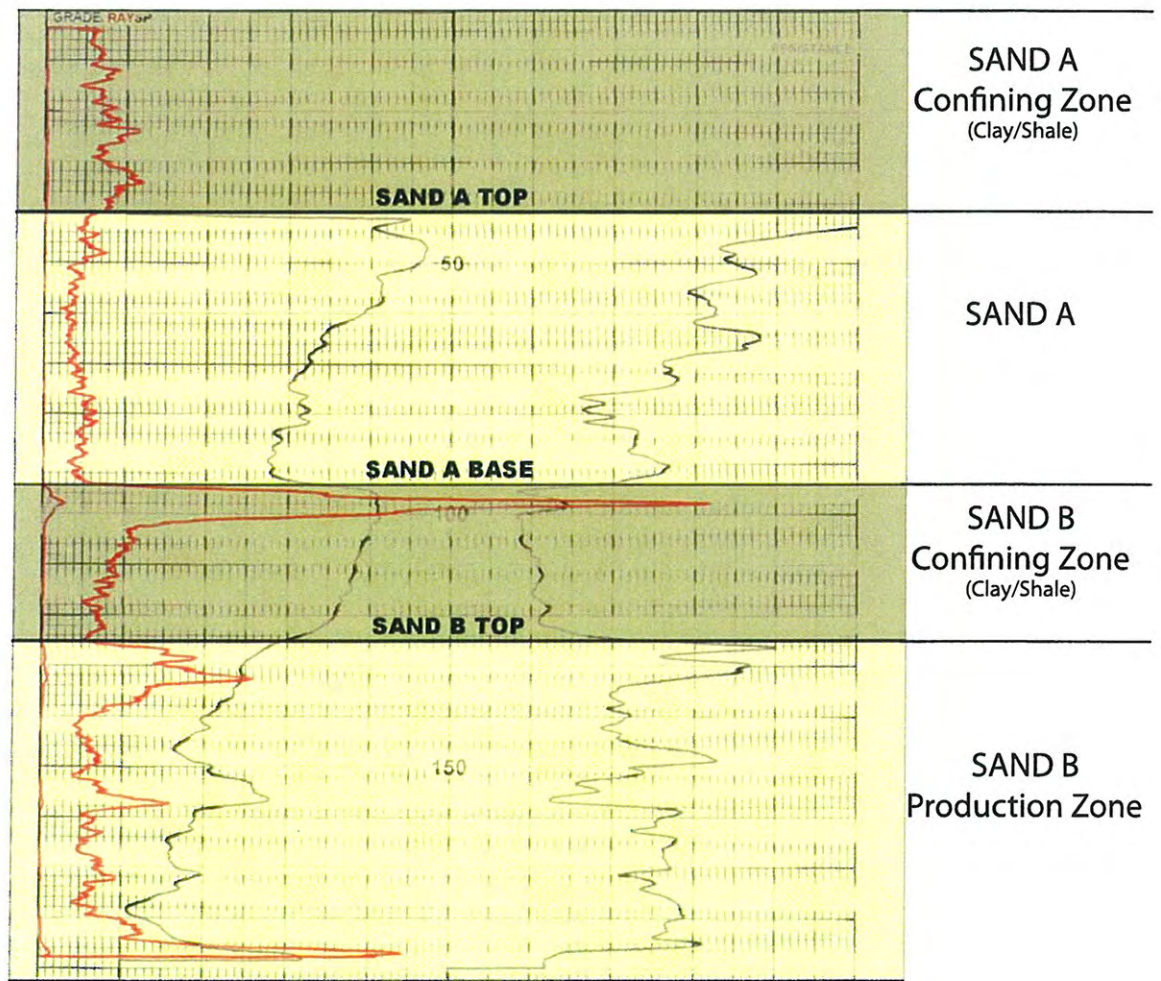




32201-BMW-11



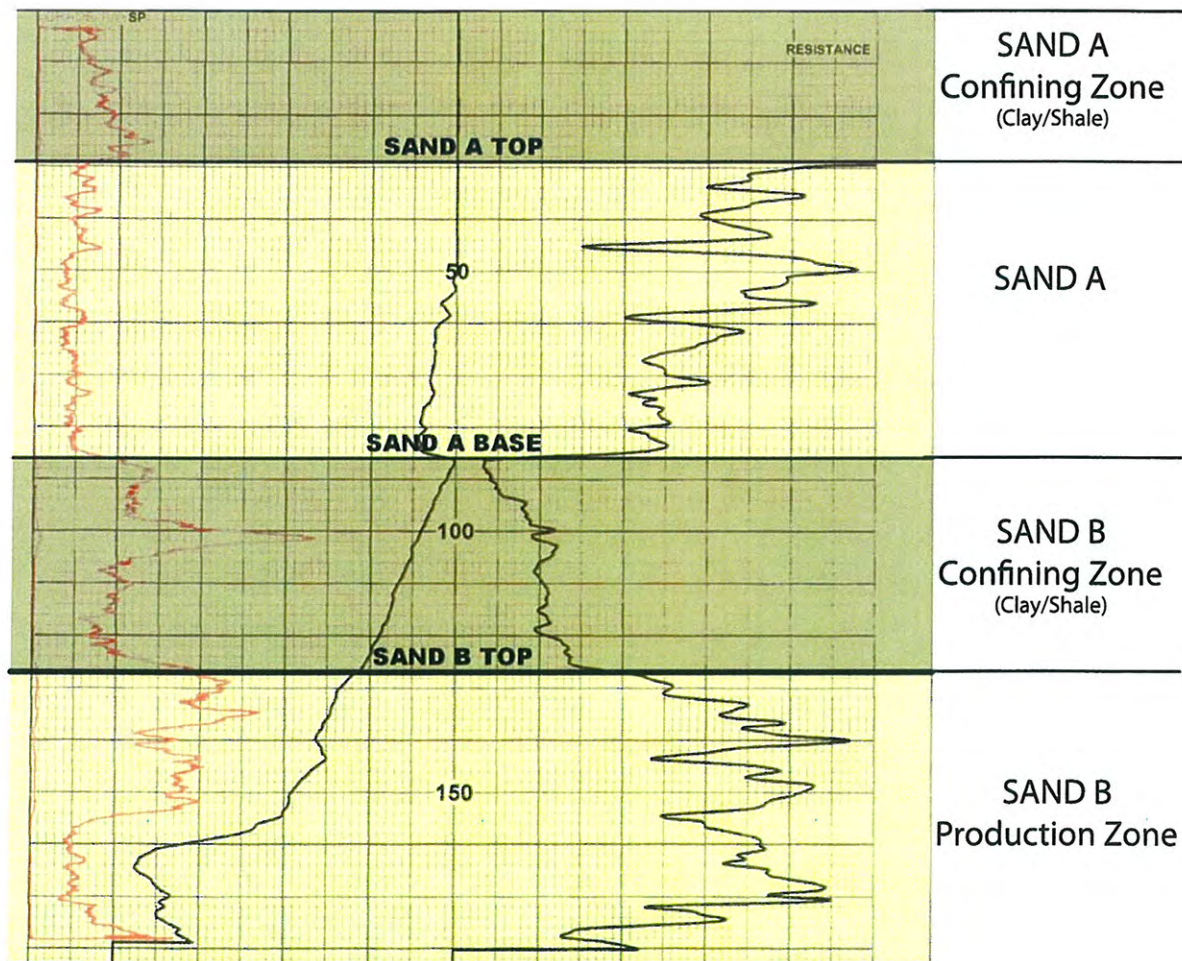
TD 184 FT  
GL 215.2 FT



32201-BMW-12



TD 181 FT  
GL 214.6 FT

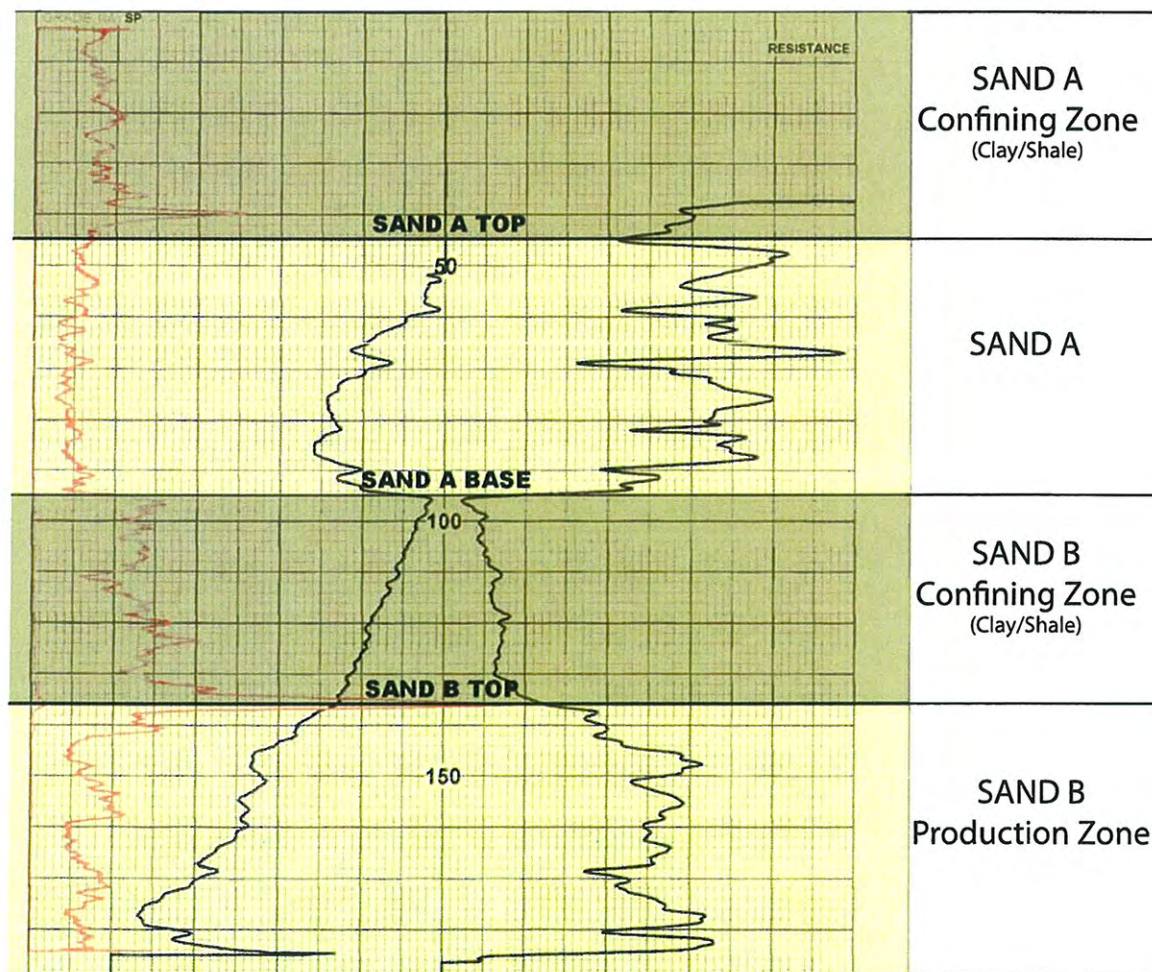




32201-BMW-13



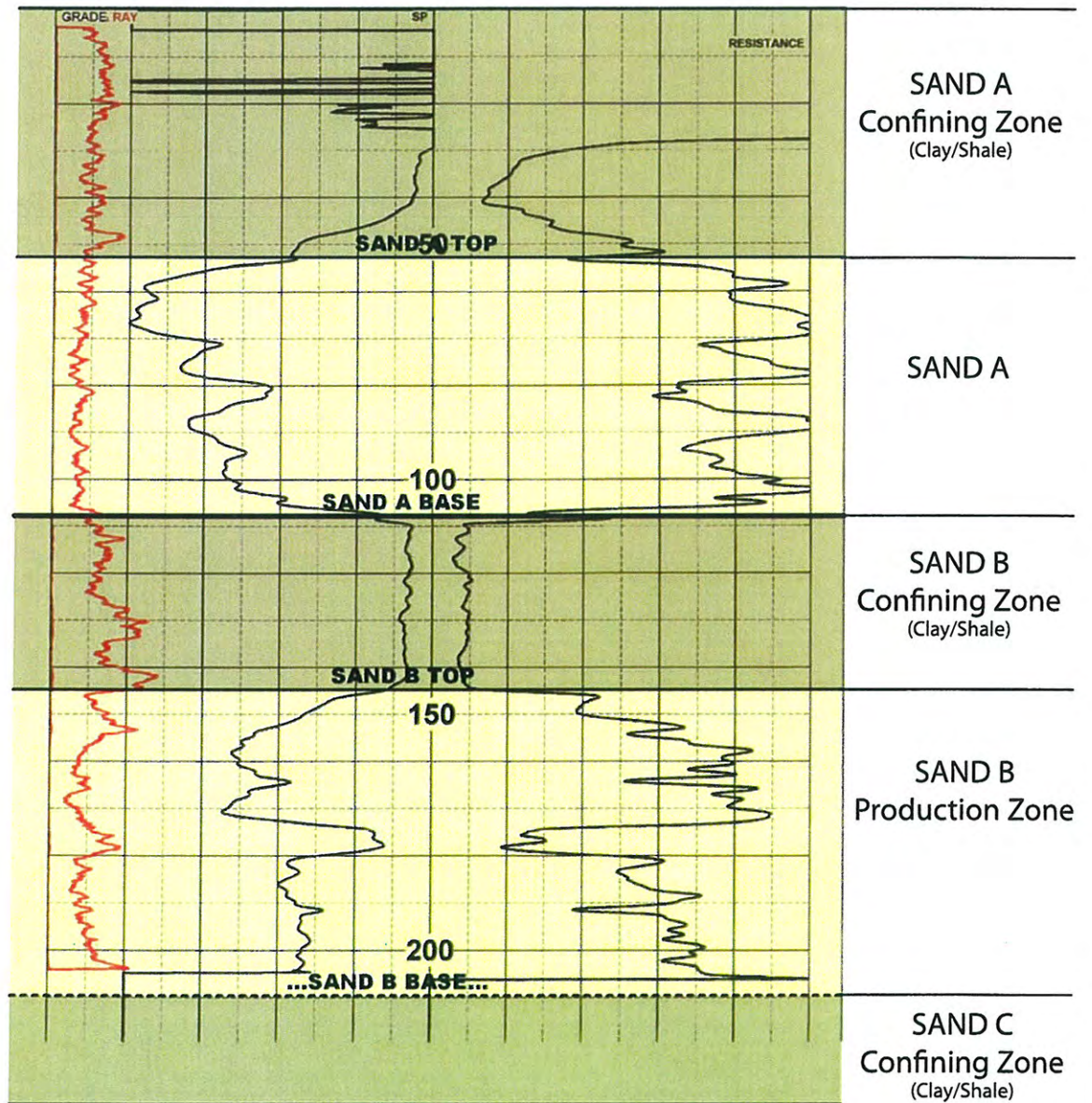
TD 187 FT  
GL 223.5 FT



32201-BMW-14



TD 206 FT  
GL 232.5 FT

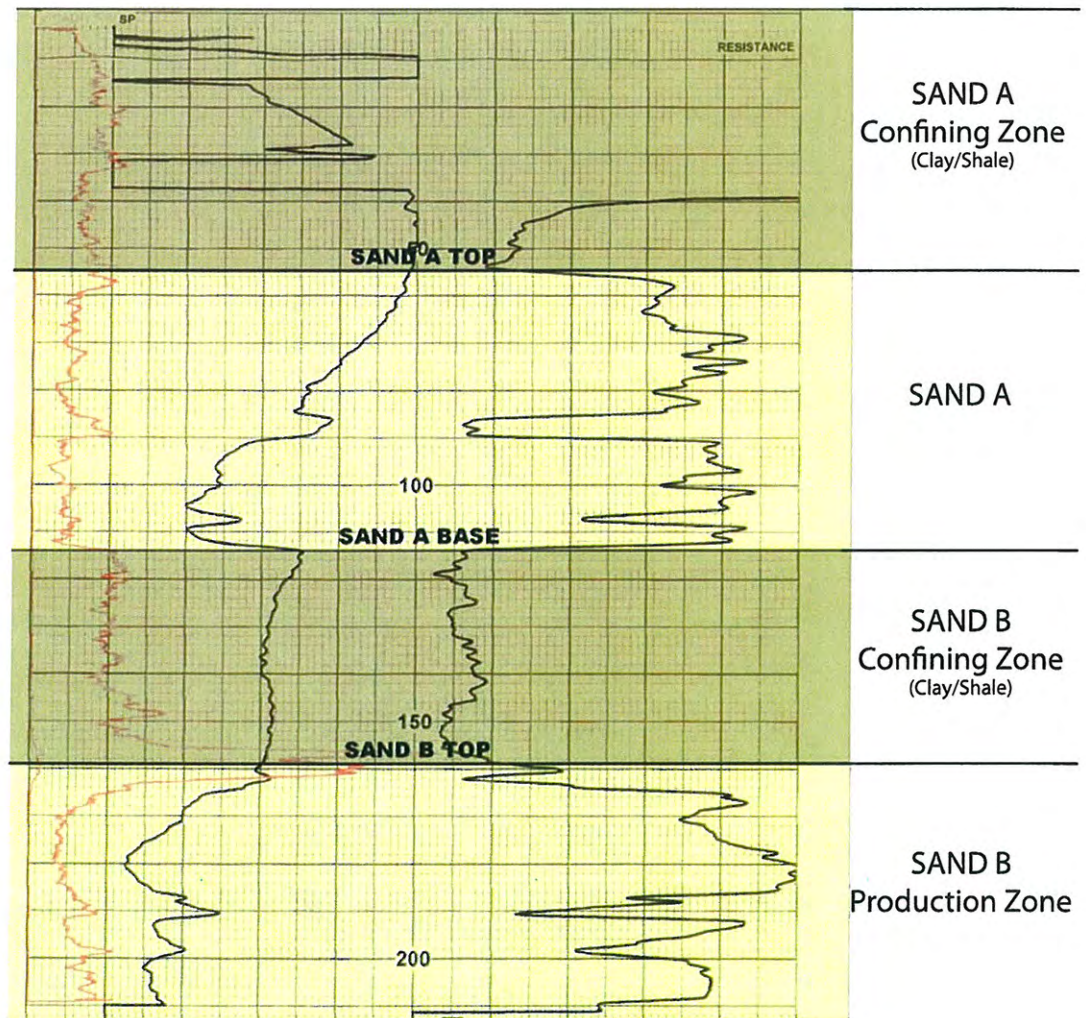




32201-BMW-15



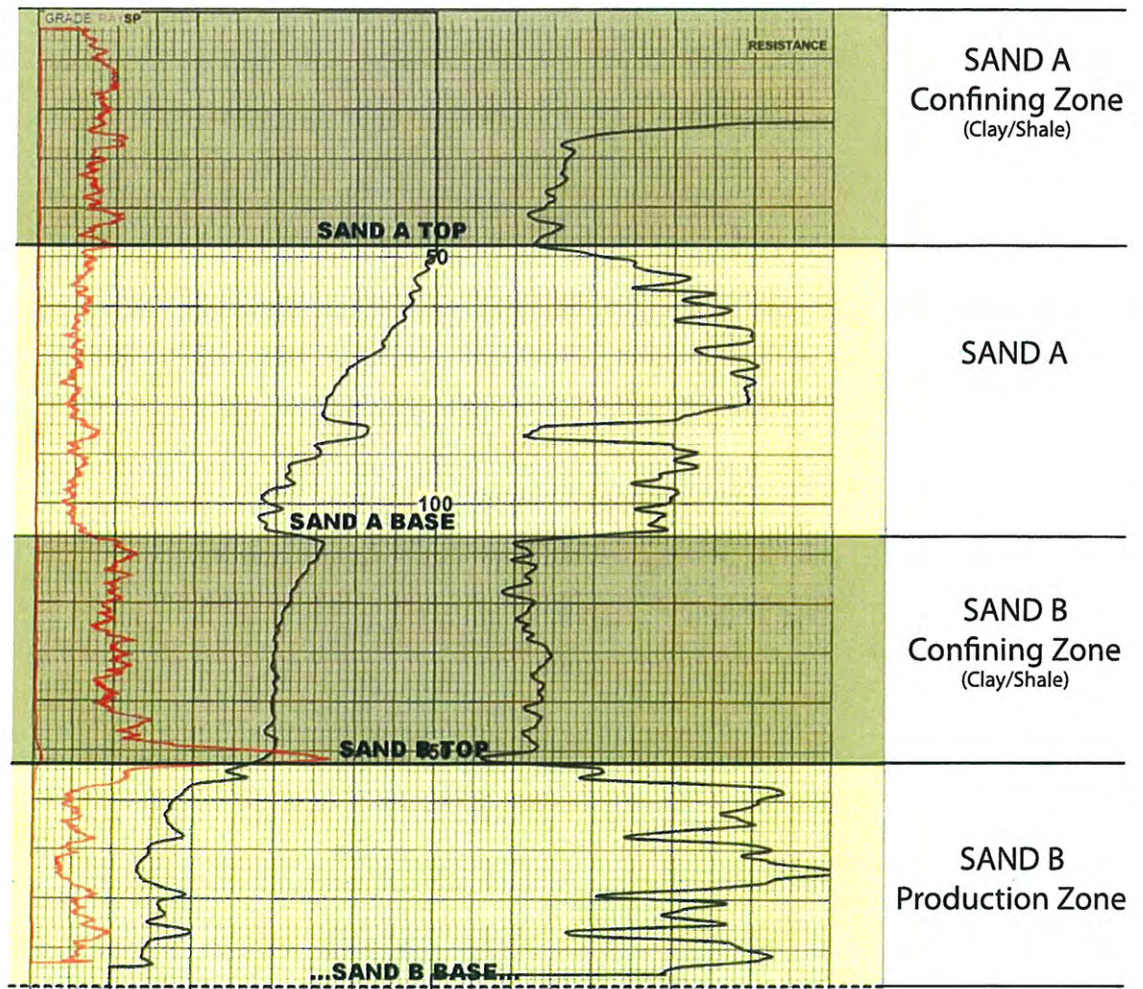
TD 212 FT  
GL 237.7 FT



32201-BMW-16



TD 195 FT  
GL 230.6 FT

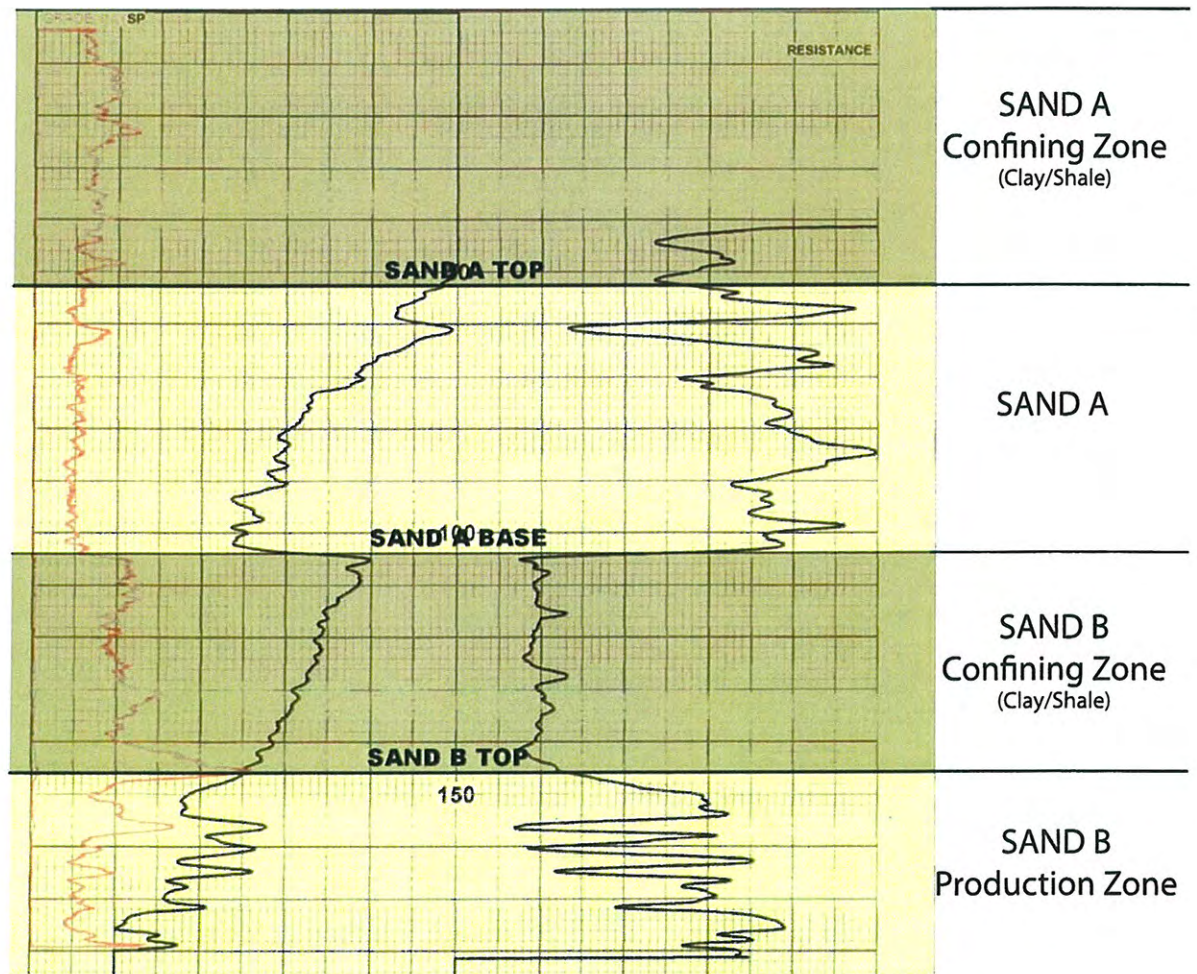




32201-BMW-17



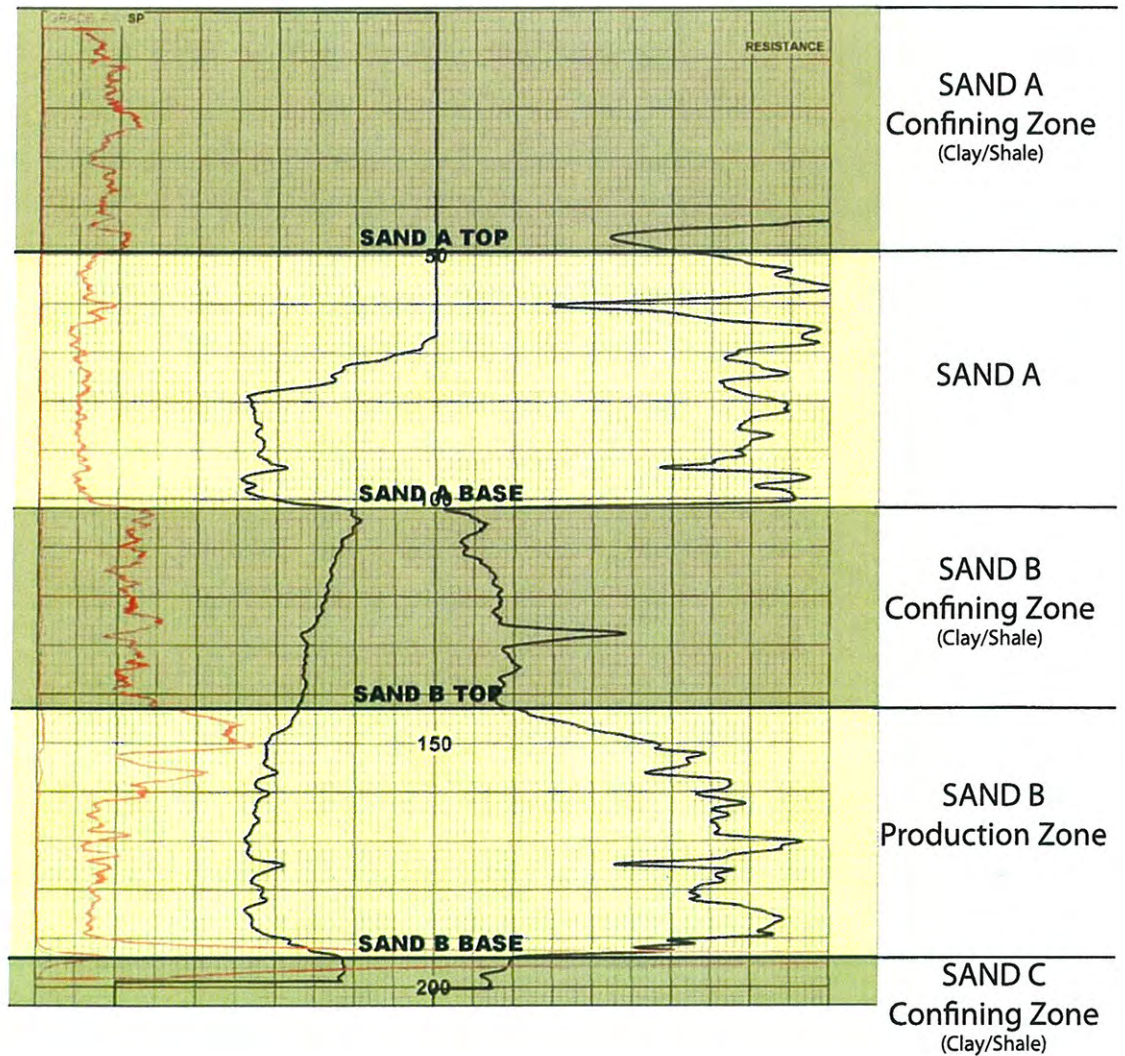
TD 182 FT  
GL 225.2 FT



32201-BMW-18



TD 201 FT  
GL 222.9 FT

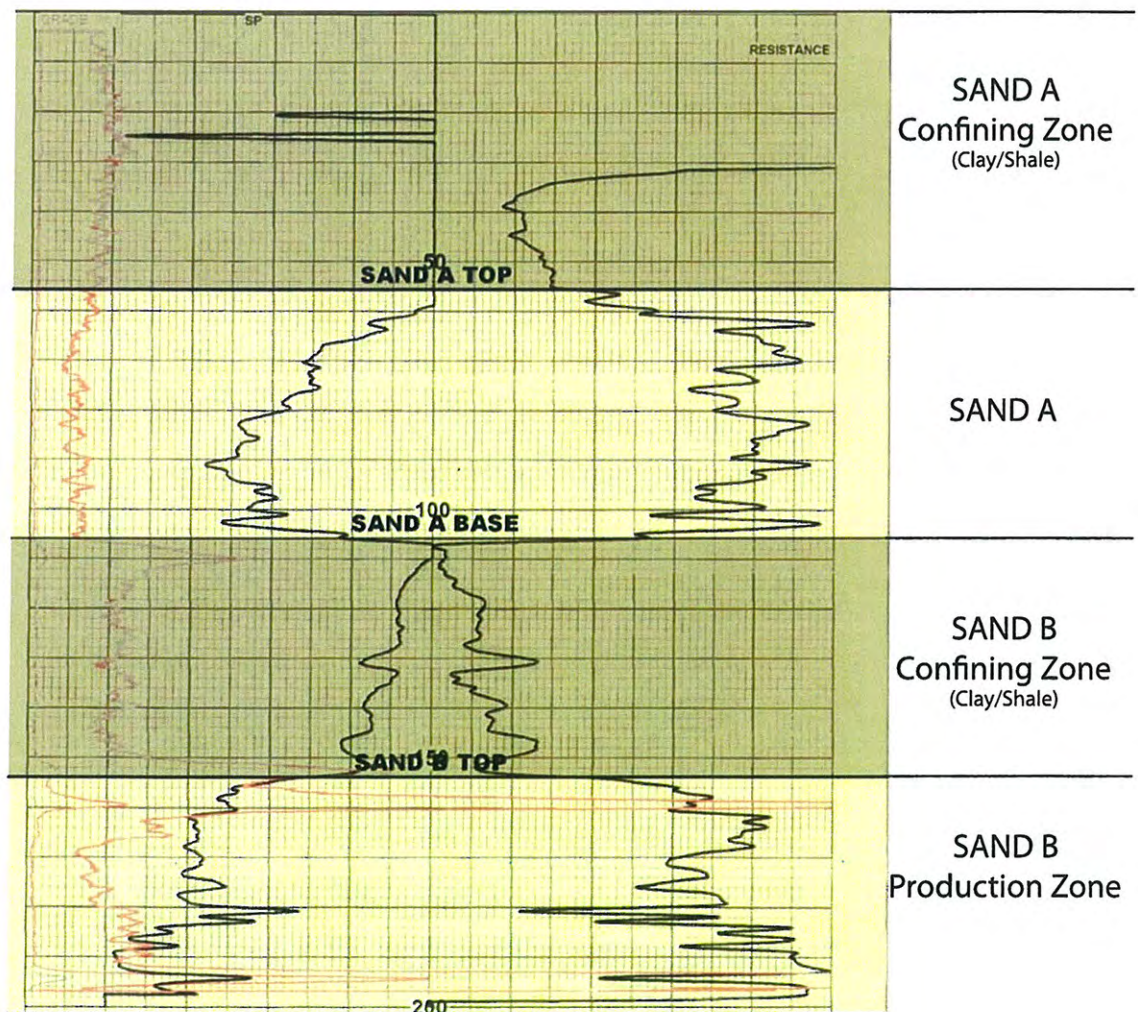




32201-BMW-19



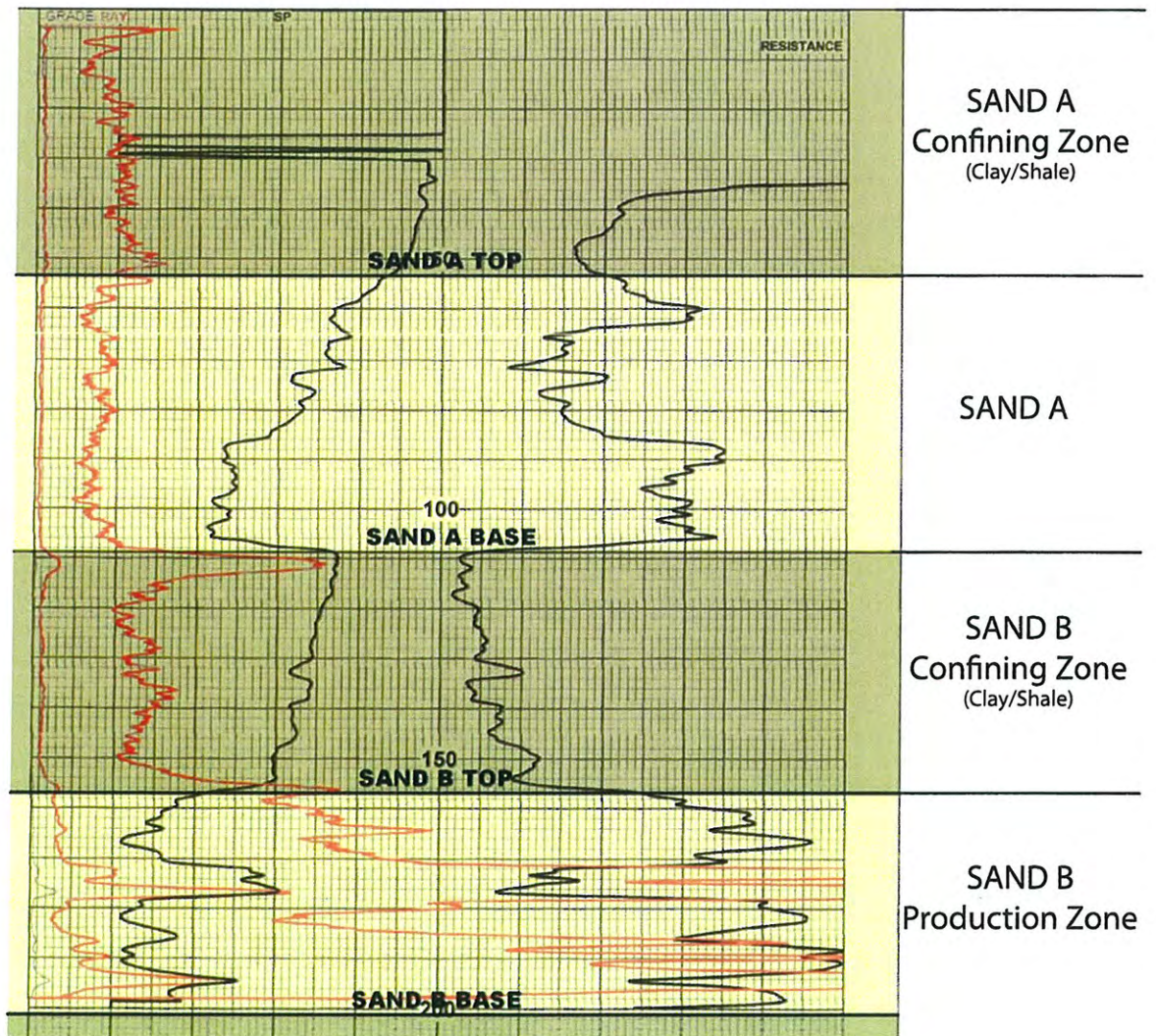
TD 199 FT  
GL 225.4 FT



32201-BMW-20



TD 201 FT  
GL 226.7 FT

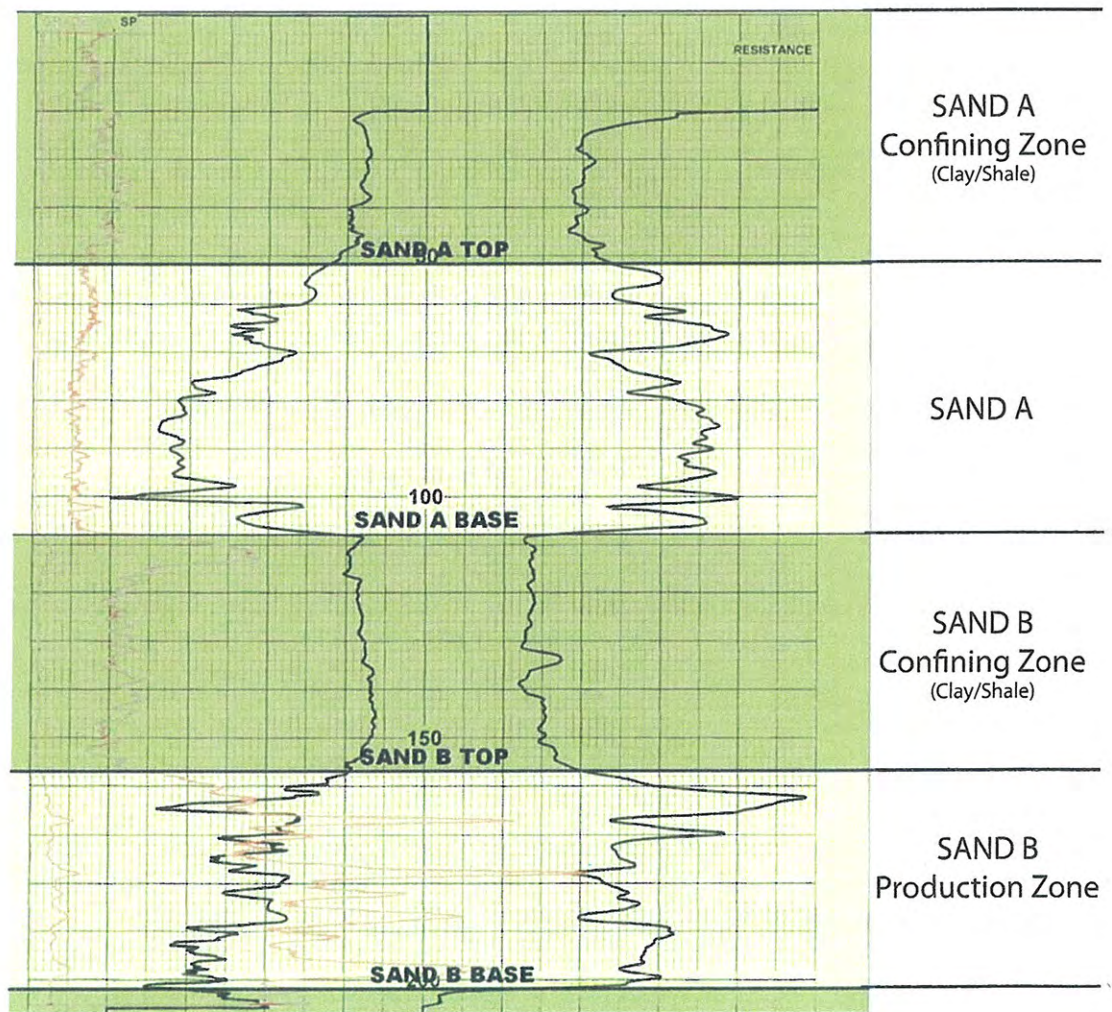




32201-BMW-21



TD 205 FT  
GL 226.9 FT

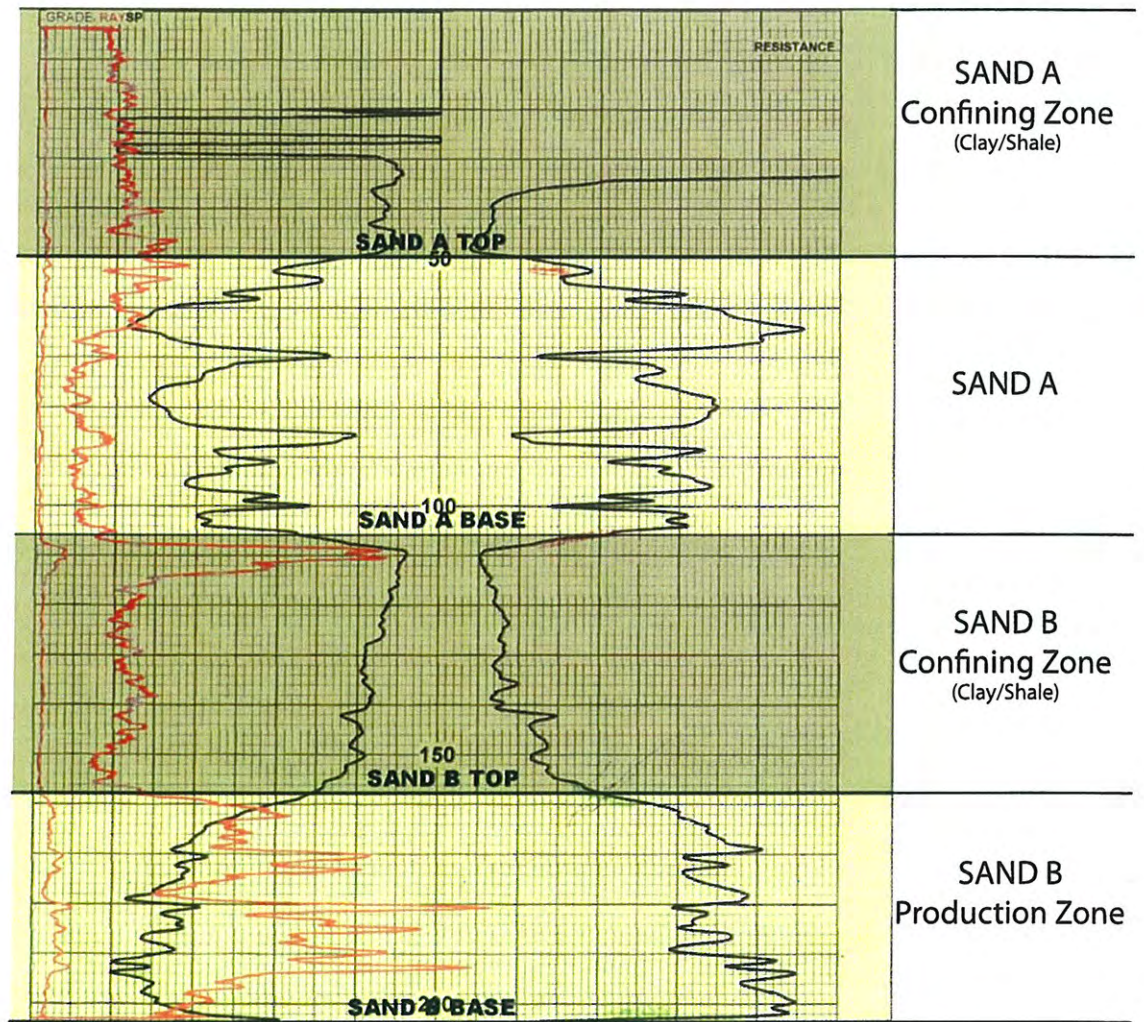




32201-BMW-22



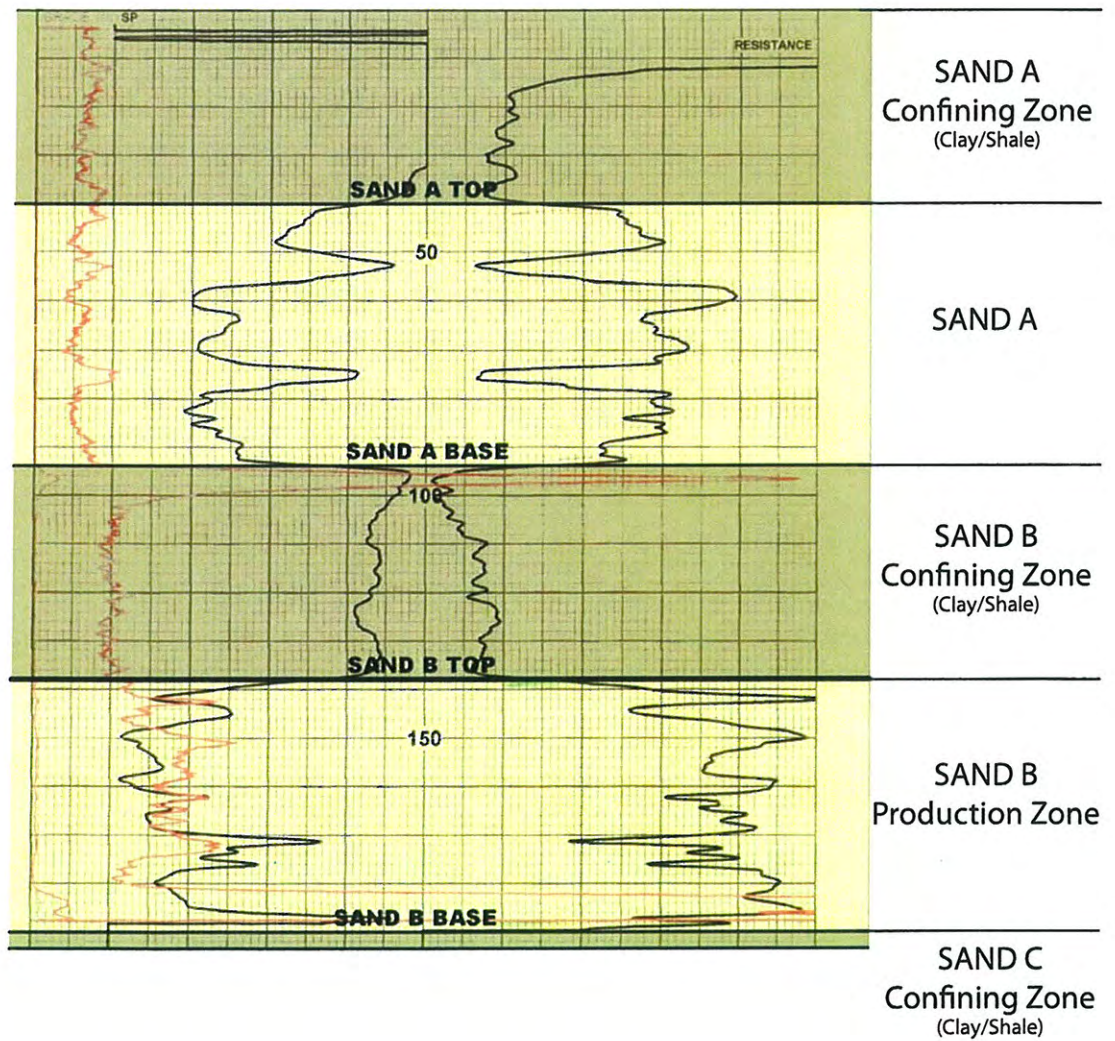
TD 205 FT  
GL 227.8 FT



32201-PTW-1



TD 190 FT  
GL 224.0 FT

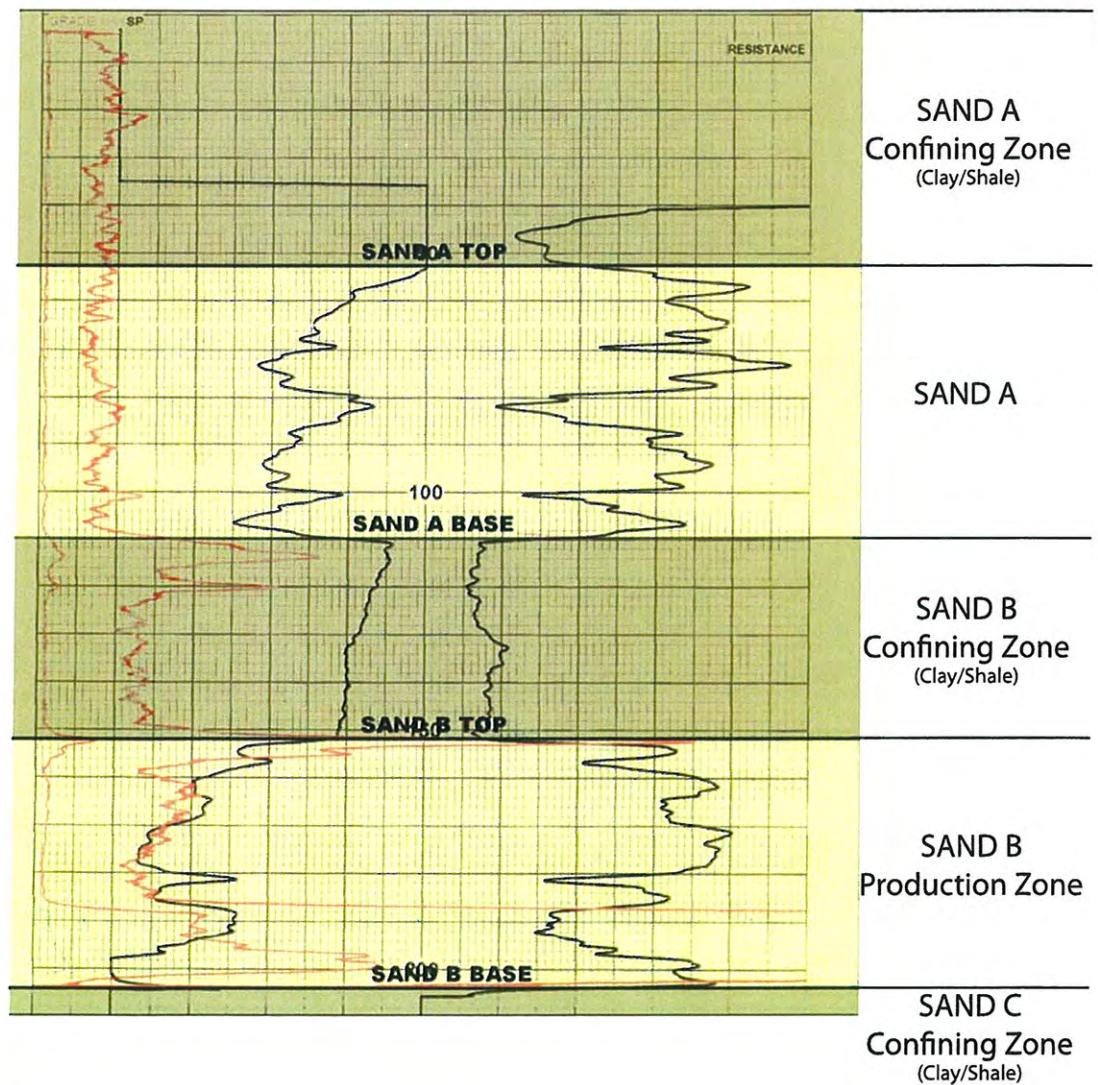




32201-PTW-2



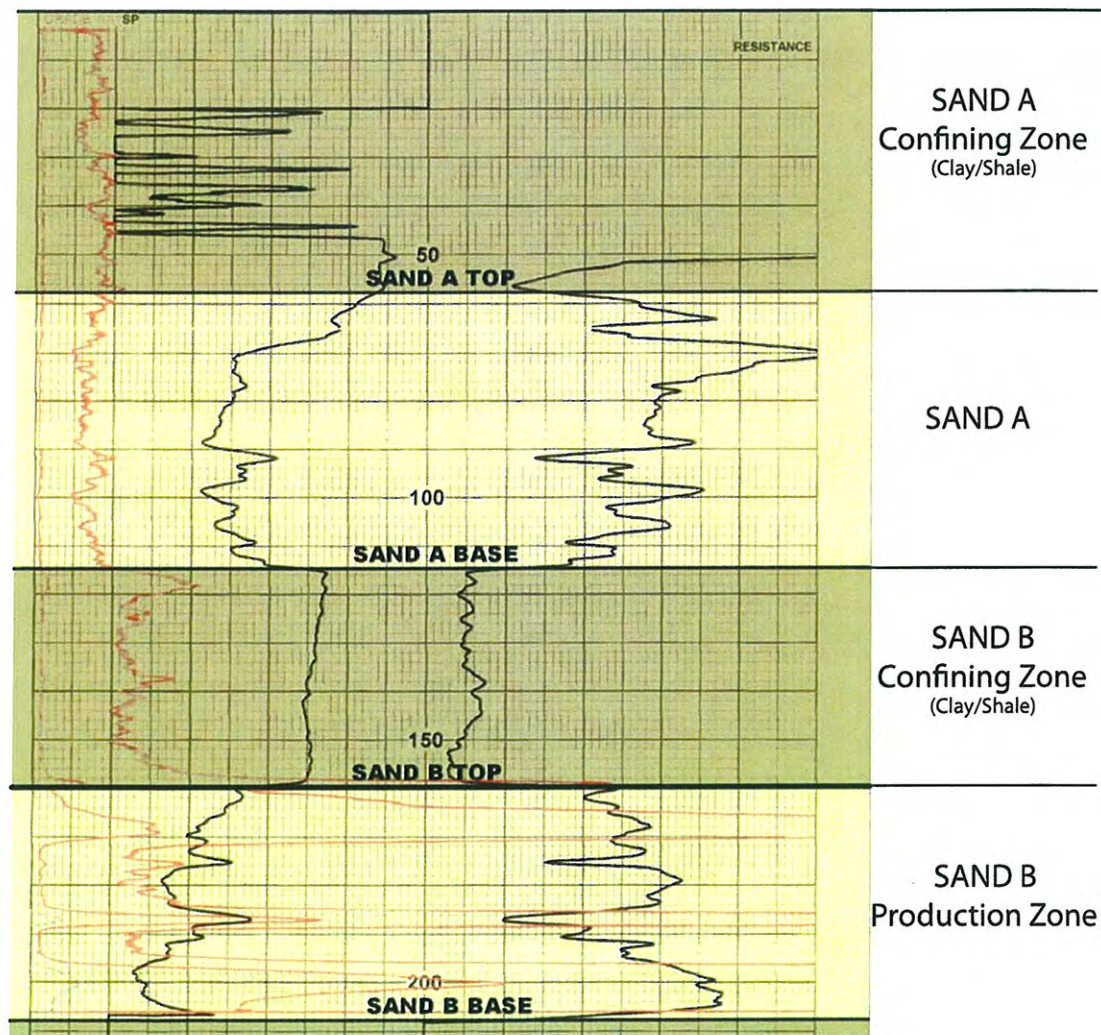
TD 206 FT  
GL 233.6 FT



32201-PTW-3



TD 208 FT  
GL 236.6 FT

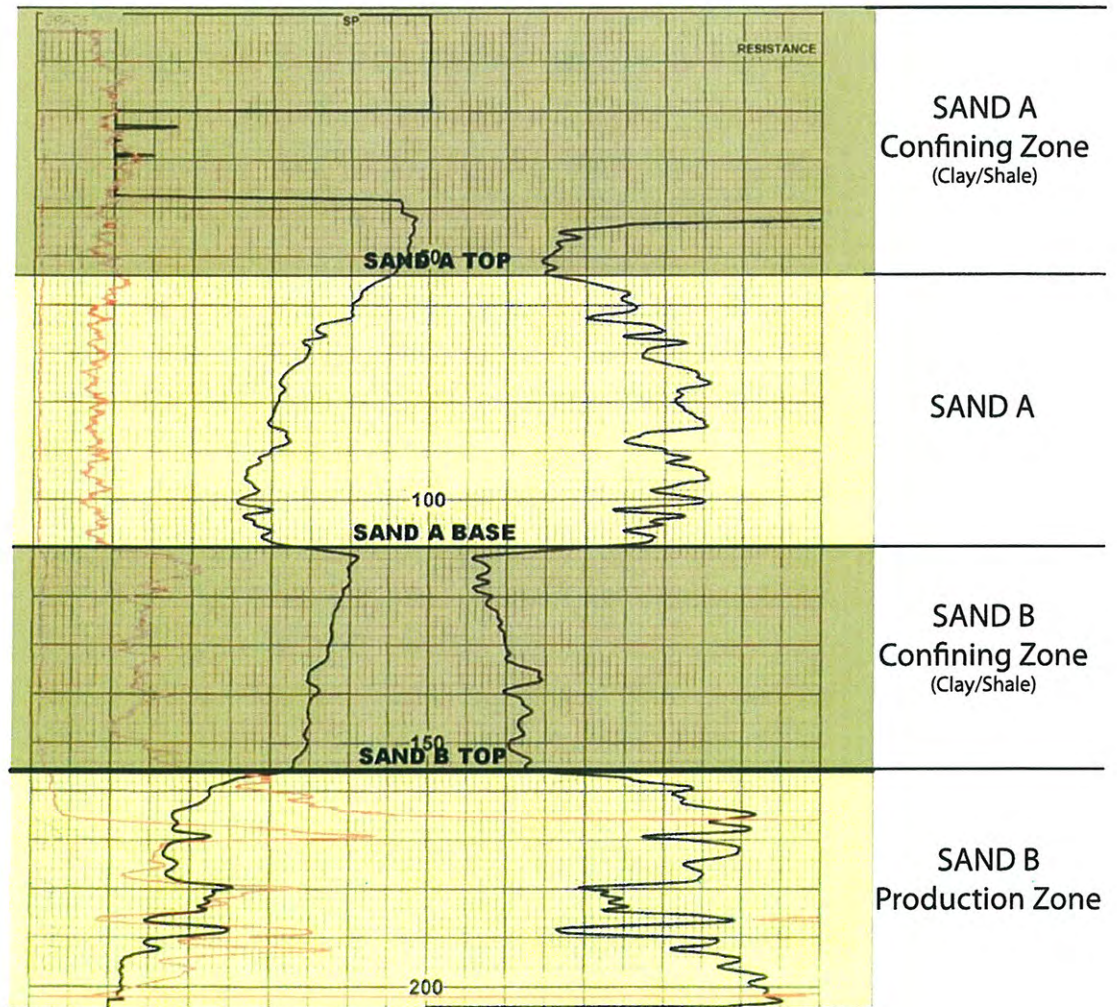




32201-PTW-4



TD 204 FT  
GL 231.1 FT

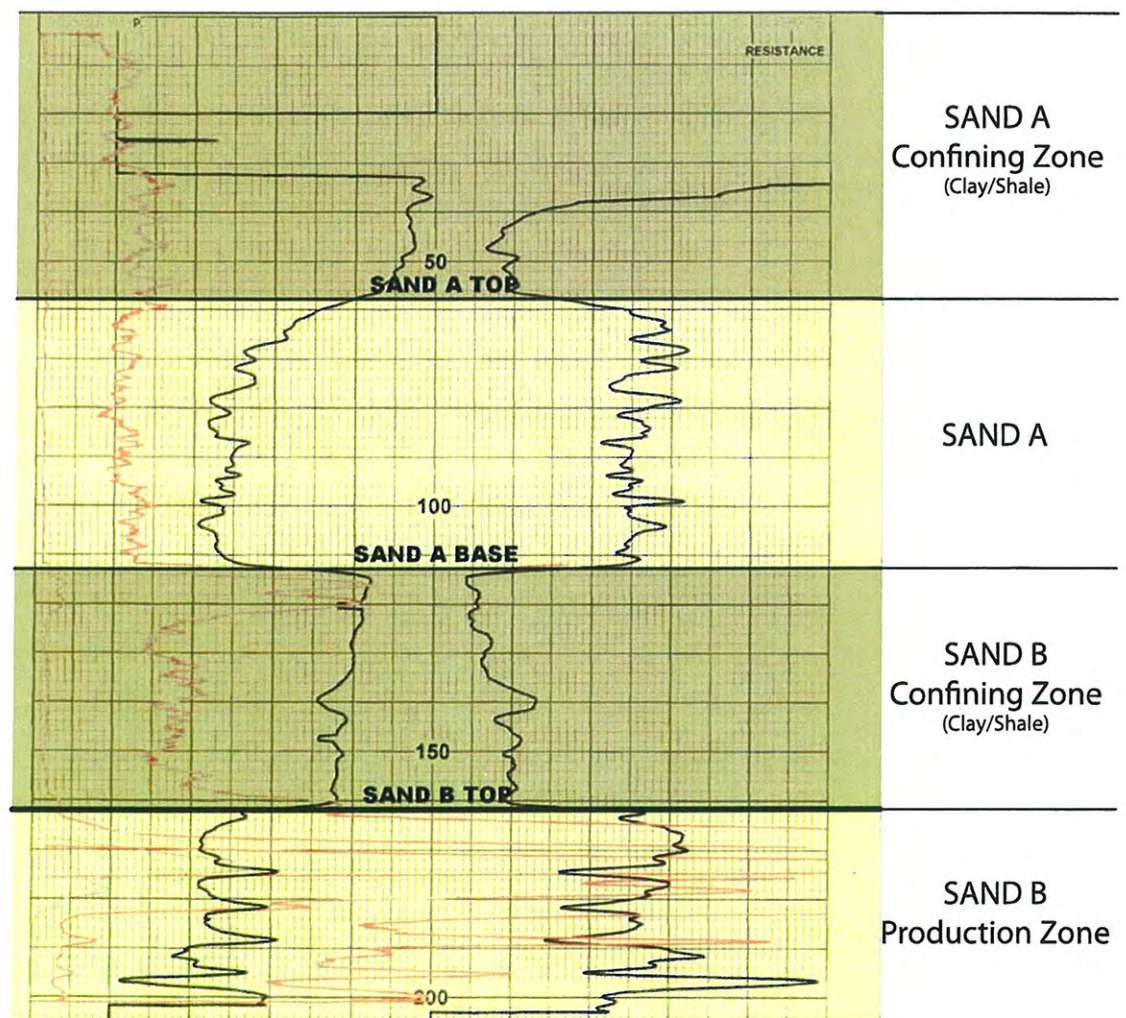




32201-PTW-5



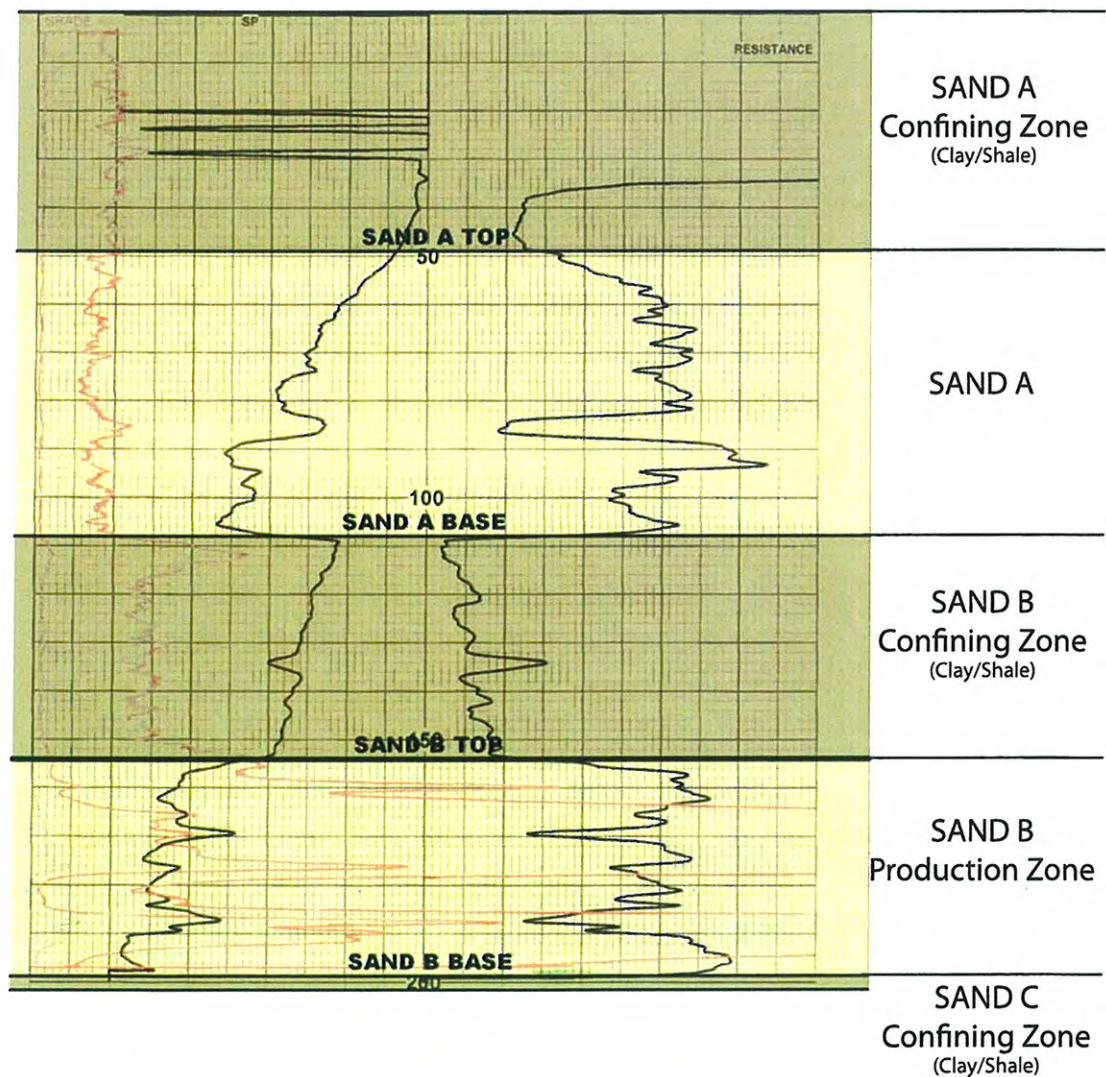
TD 204 FT  
GL 232.7 FT



32201-PTW-6



TD 199 FT  
GL 227.5 FT

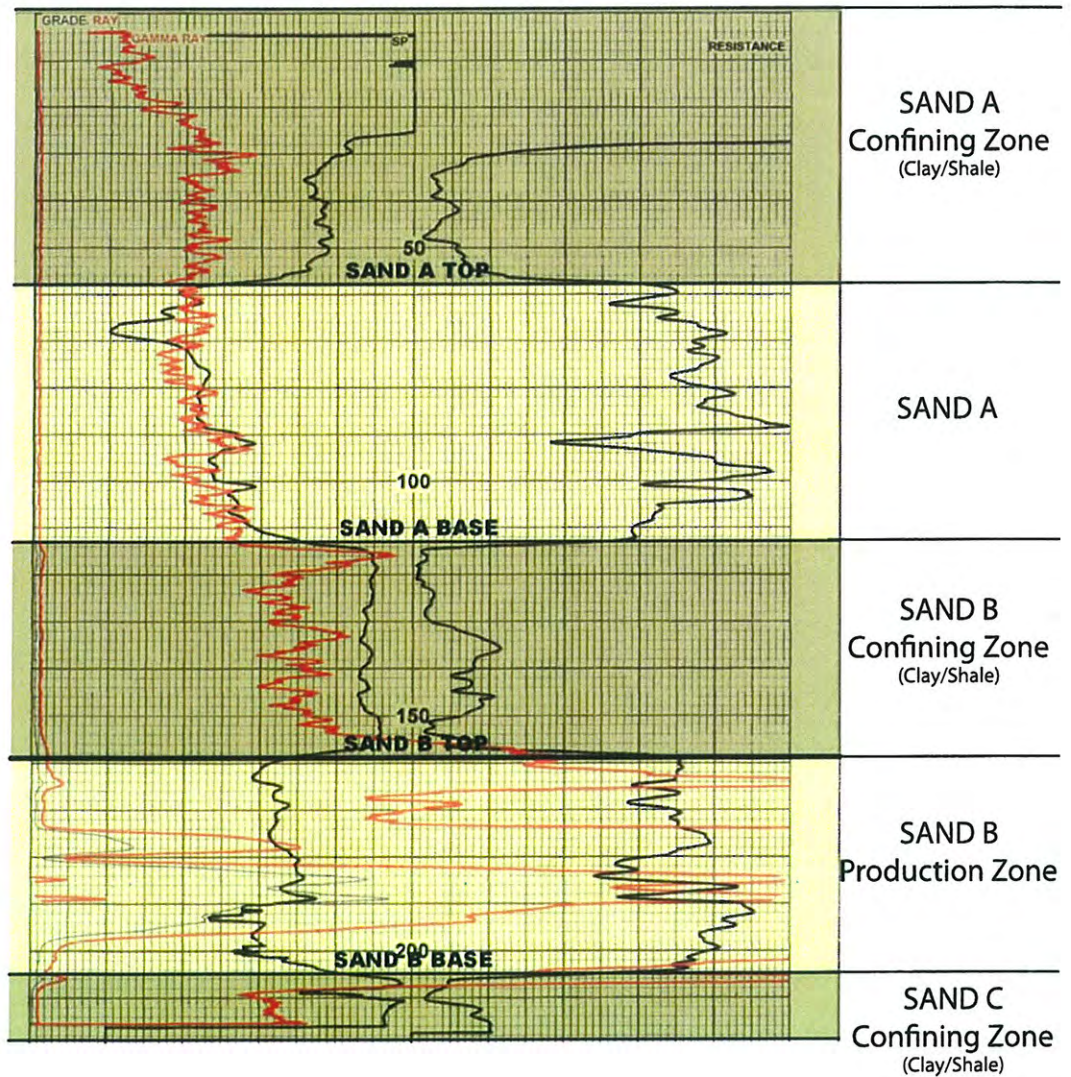




32201-RBLB-1



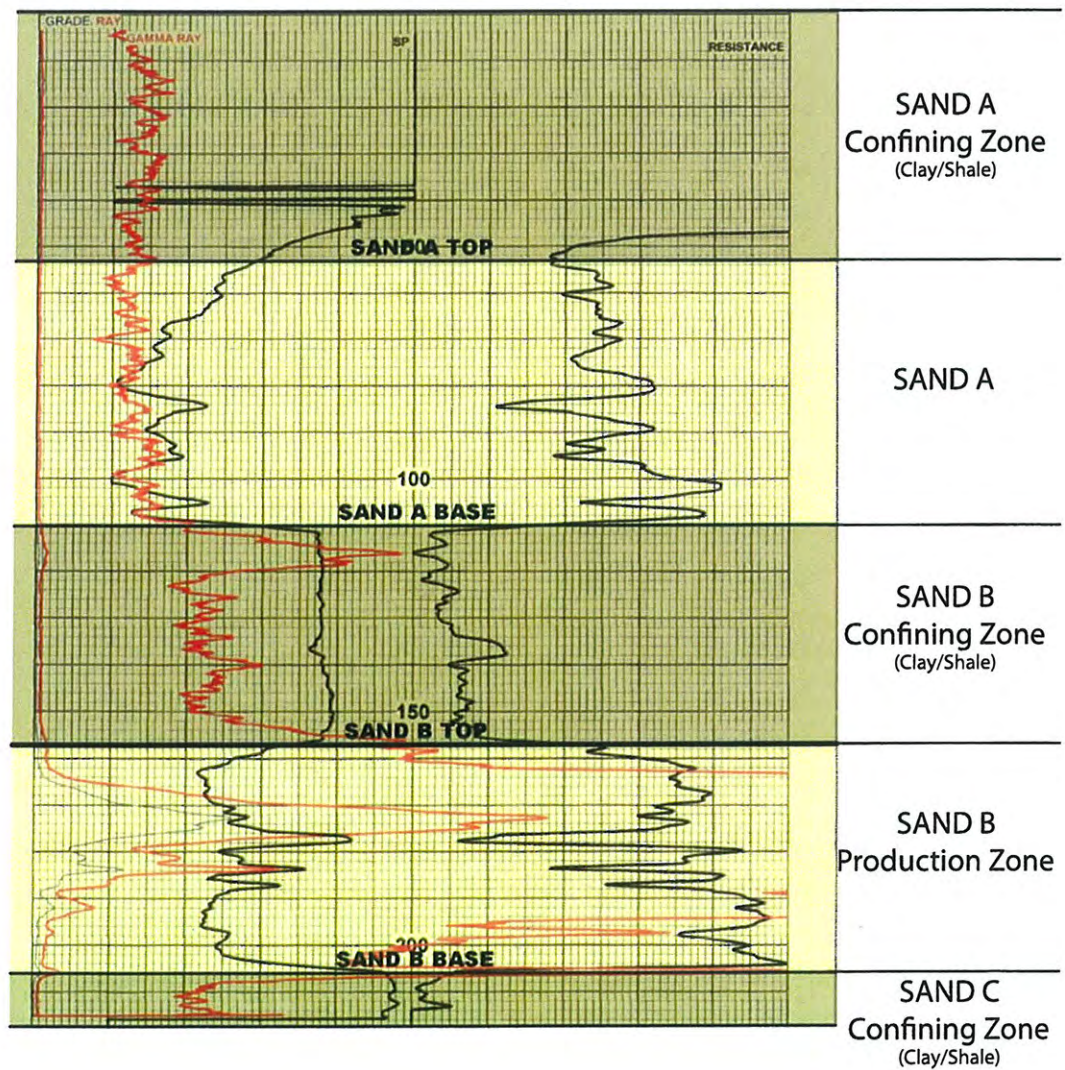
TD 225 FT  
GL 233.0 FT



32201-RBLB-3



TD 220 FT  
GL 231.6 FT

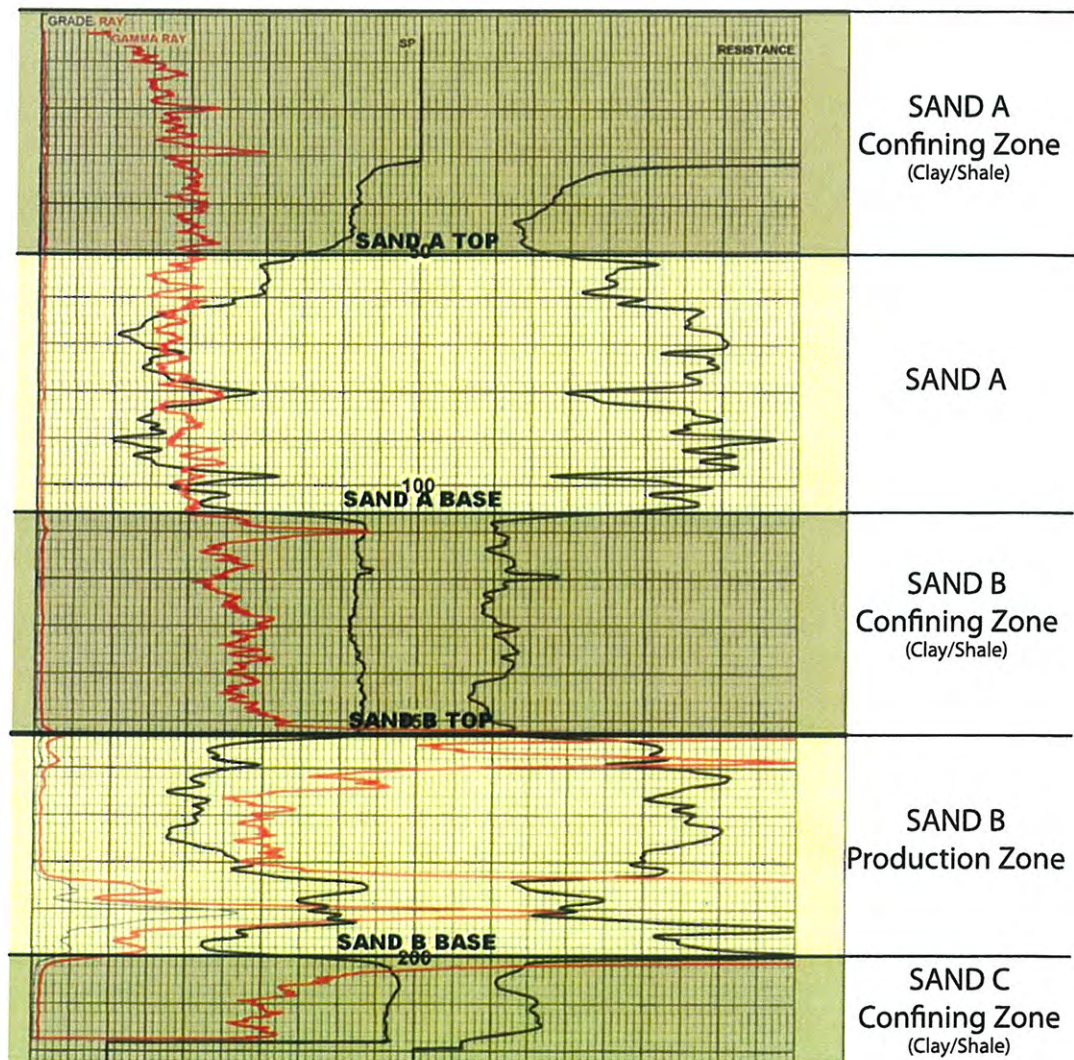




32201-RBLB-4



TD 230 FT  
GL 232.7 FT

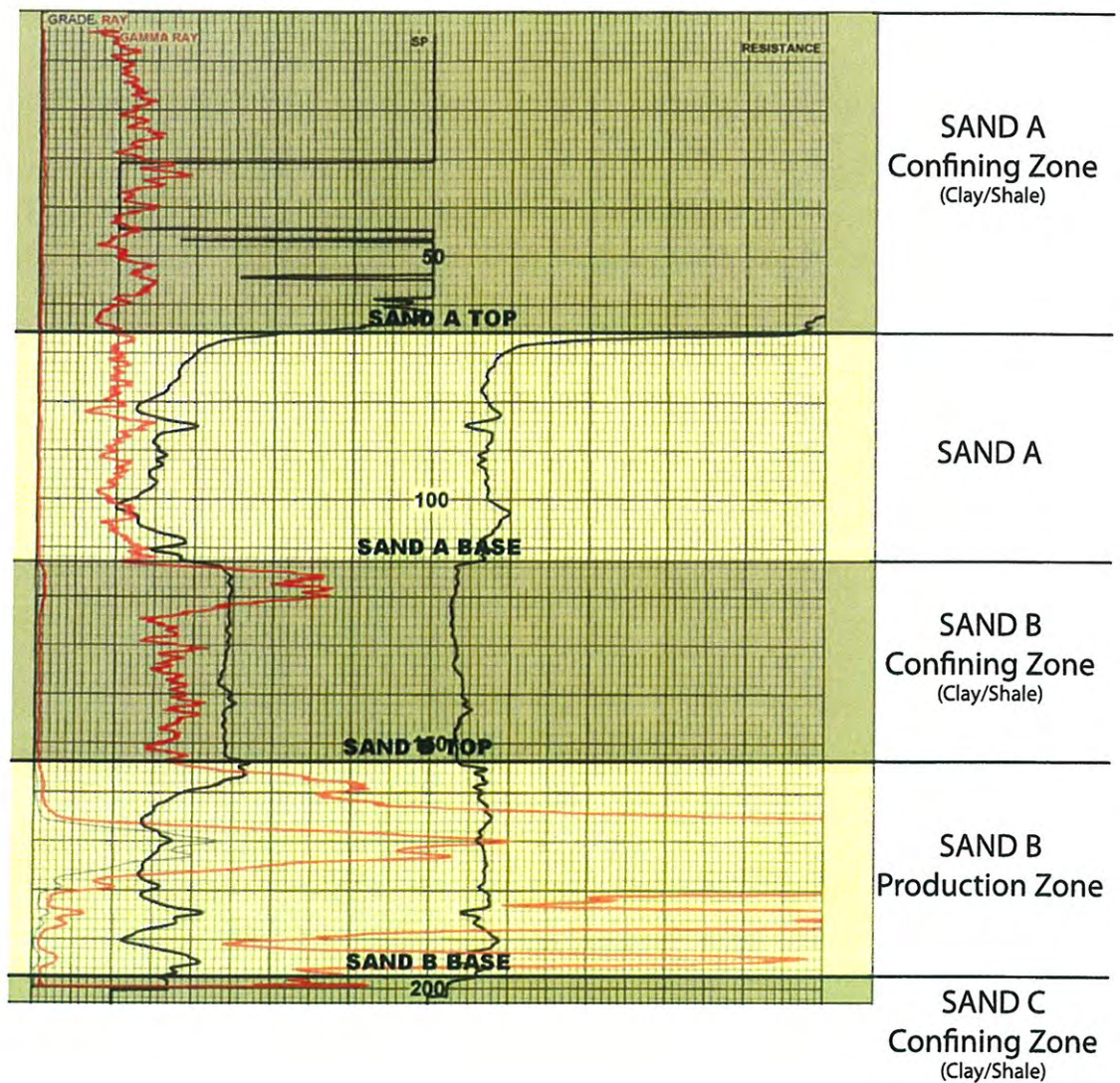




32201-RBLB-5



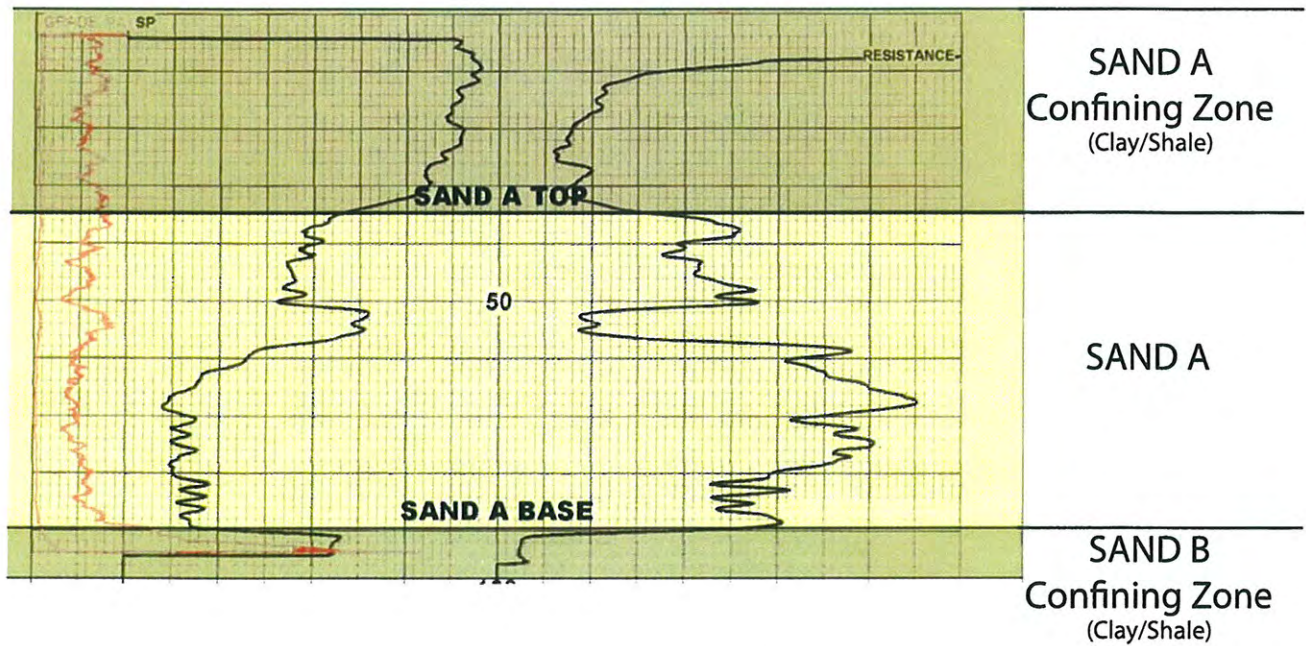
TD 220 FT  
GL 232.0 FT



32201-OMW-1



TD 97 FT  
GL 221.5 FT

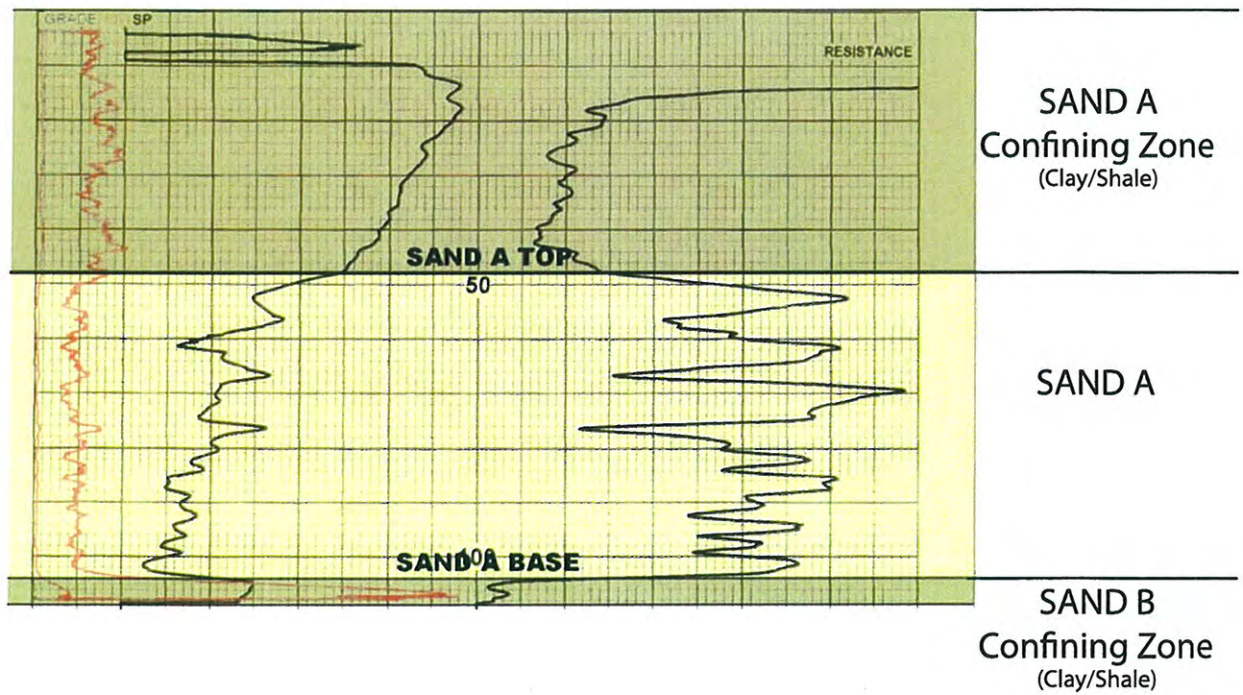




32201-OMW-2



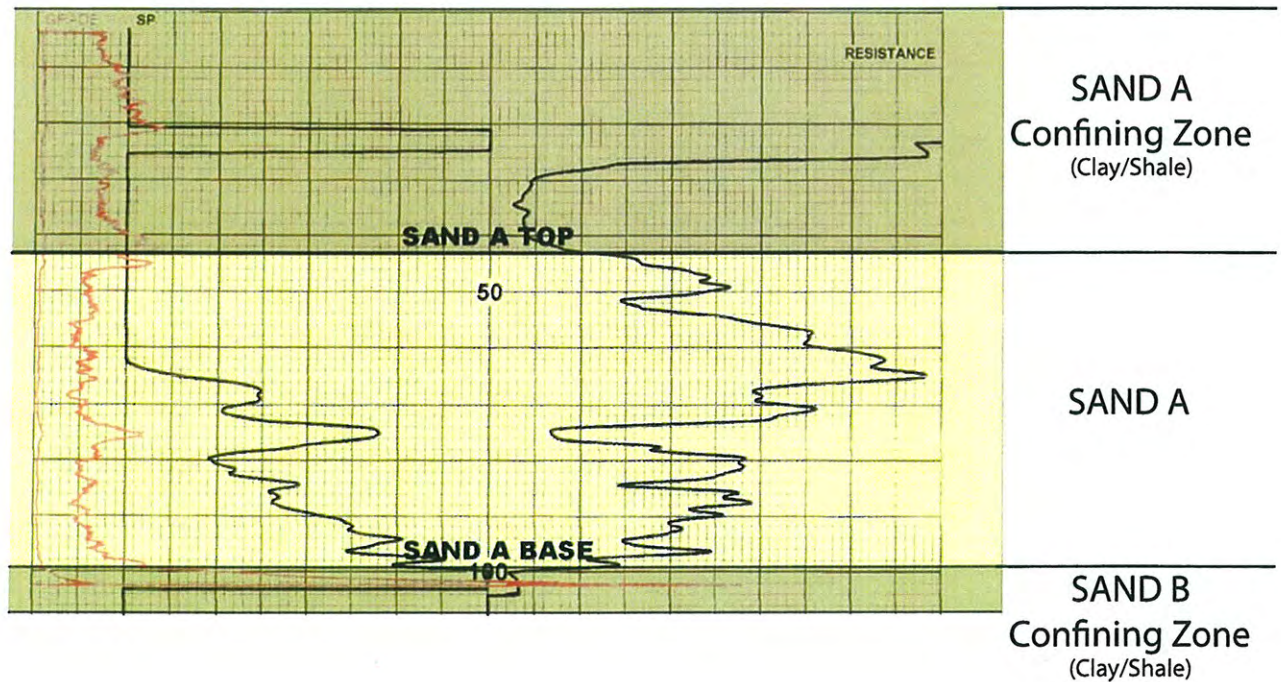
TD 110 FT  
GL 230.7 FT



32201-OMW-3



TD 105 FT  
GL 226.8 FT

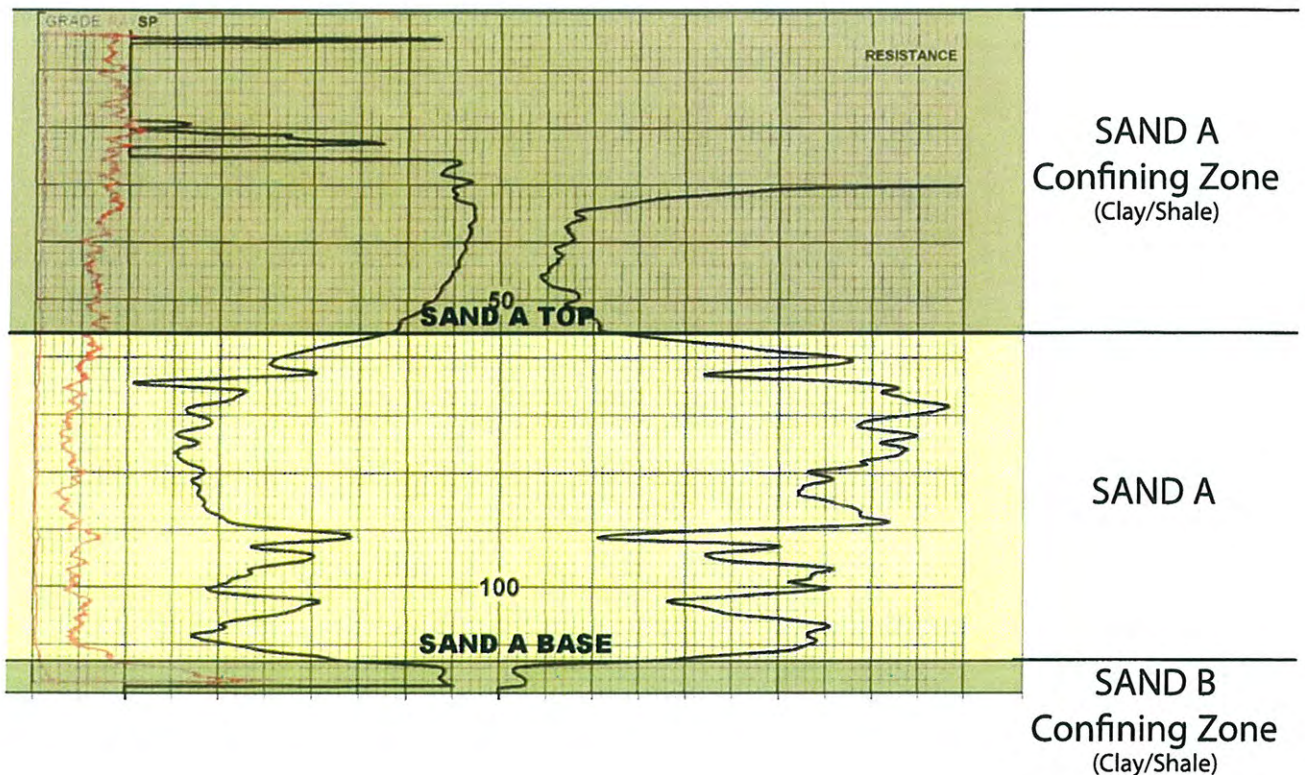




32201-OMW-4



TD 119 FT  
GL 236.3 FT

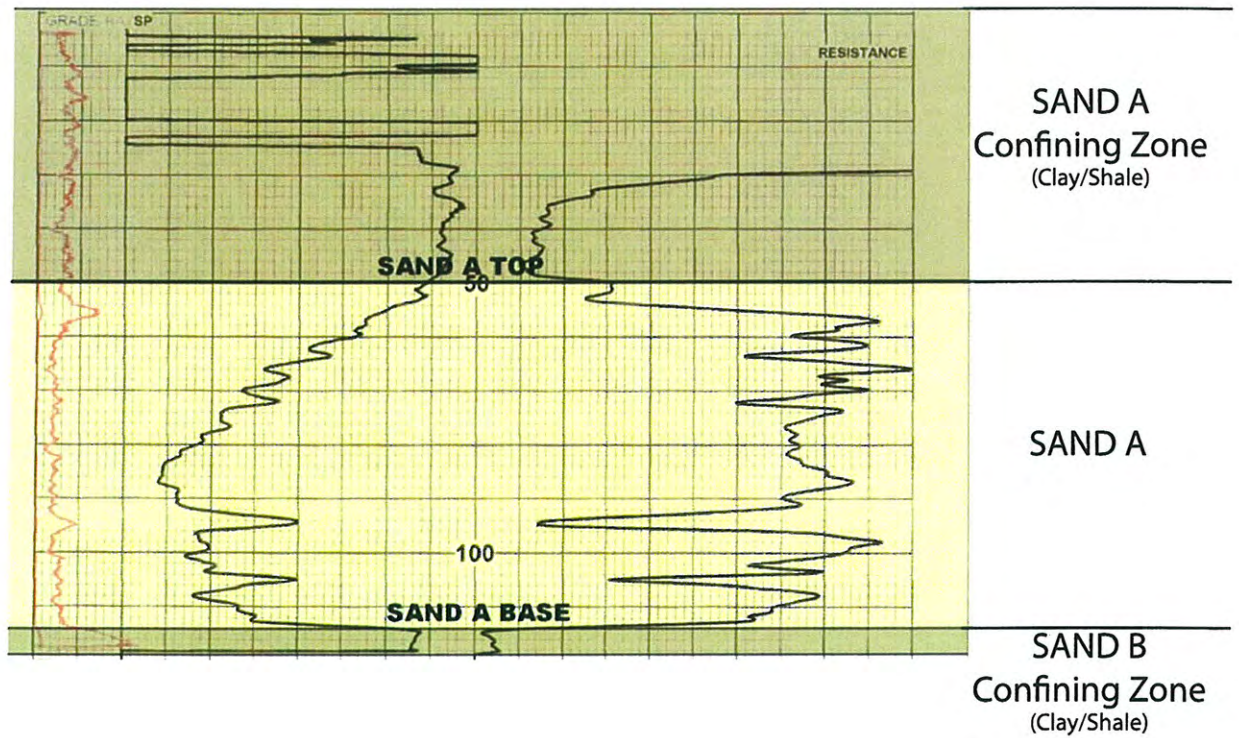




32201-OMW-5



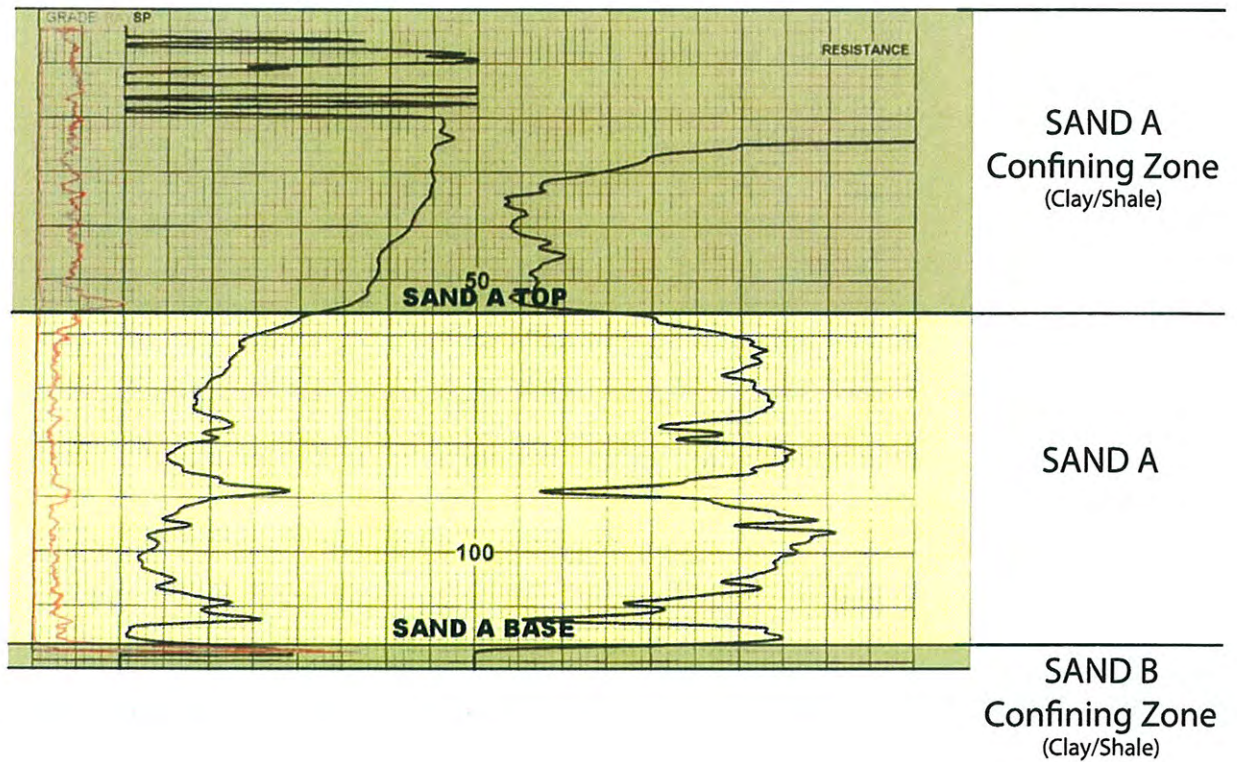
TD 120 FT  
GL 235.5 FT



32201-OMW-6



TD 121 FT  
GL 233.6 FT

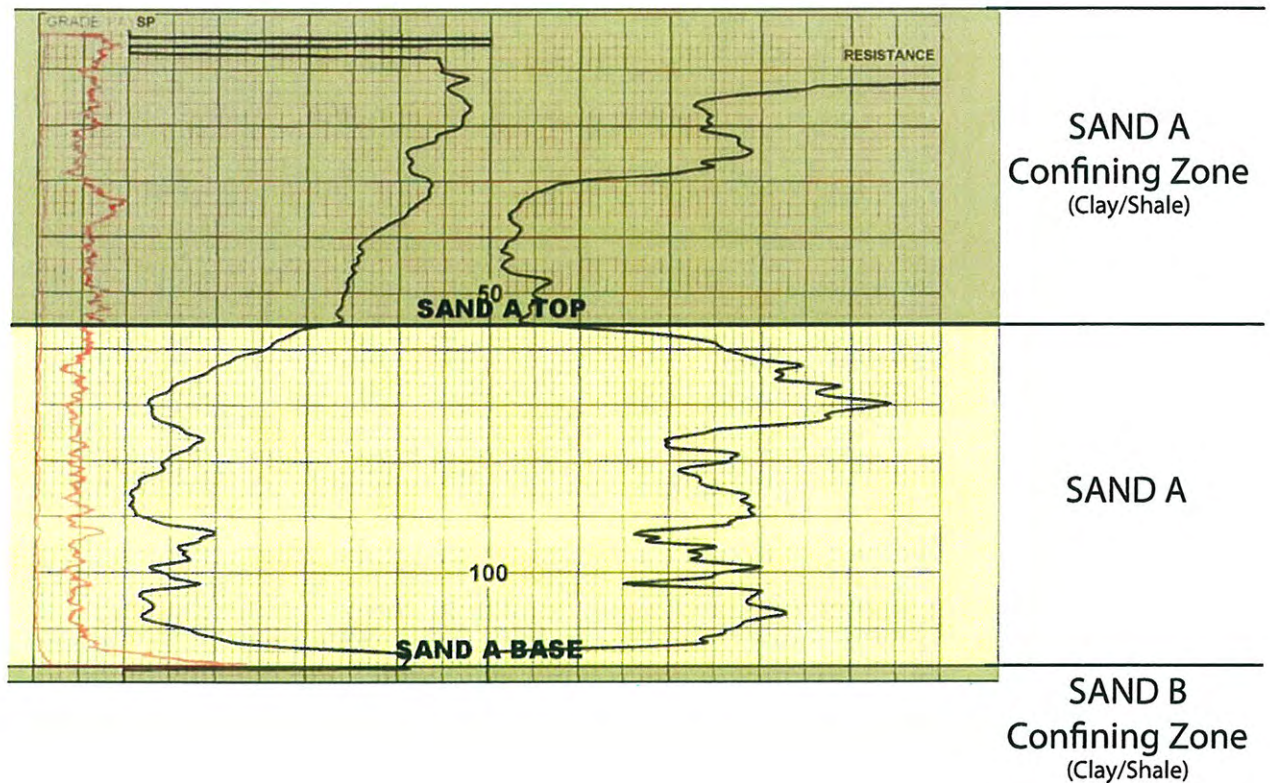




32201-OMW-7



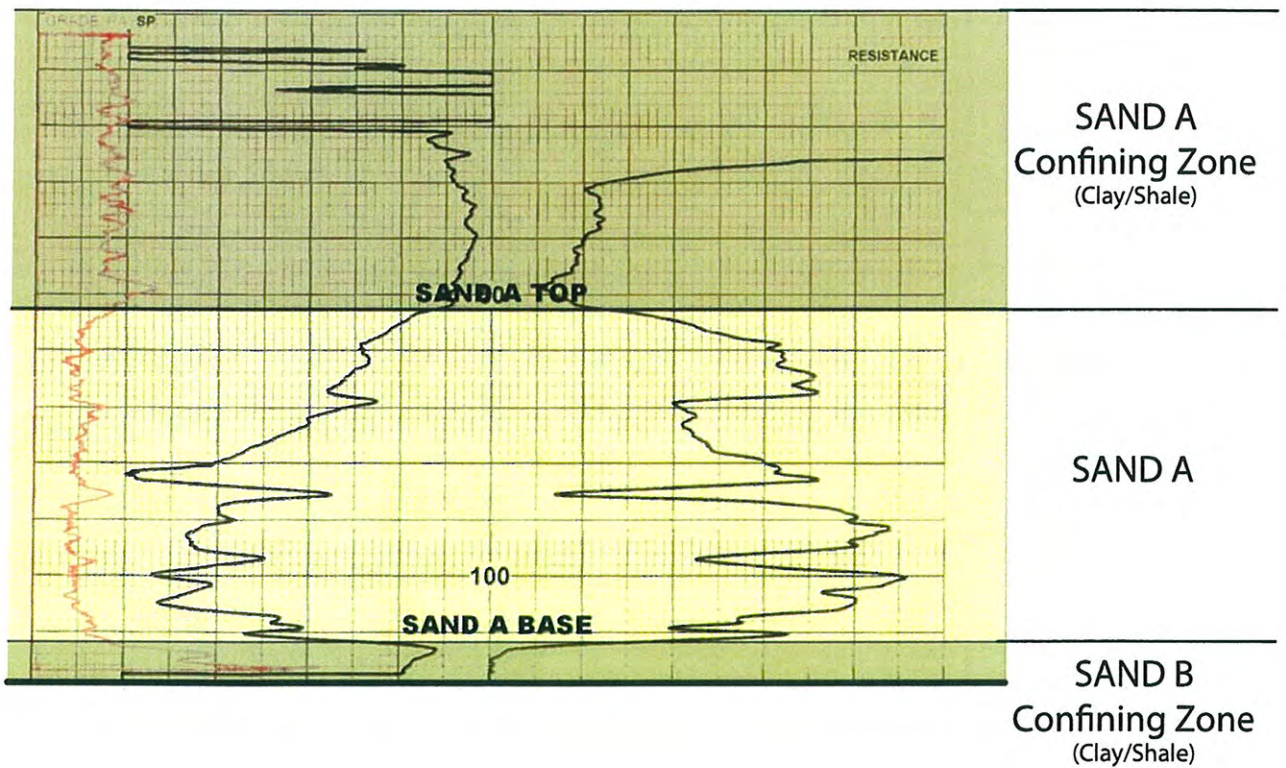
TD 119 FT  
GL 235.1 FT



32201-OMW-8



TD 119 FT  
GL 230.8 FT

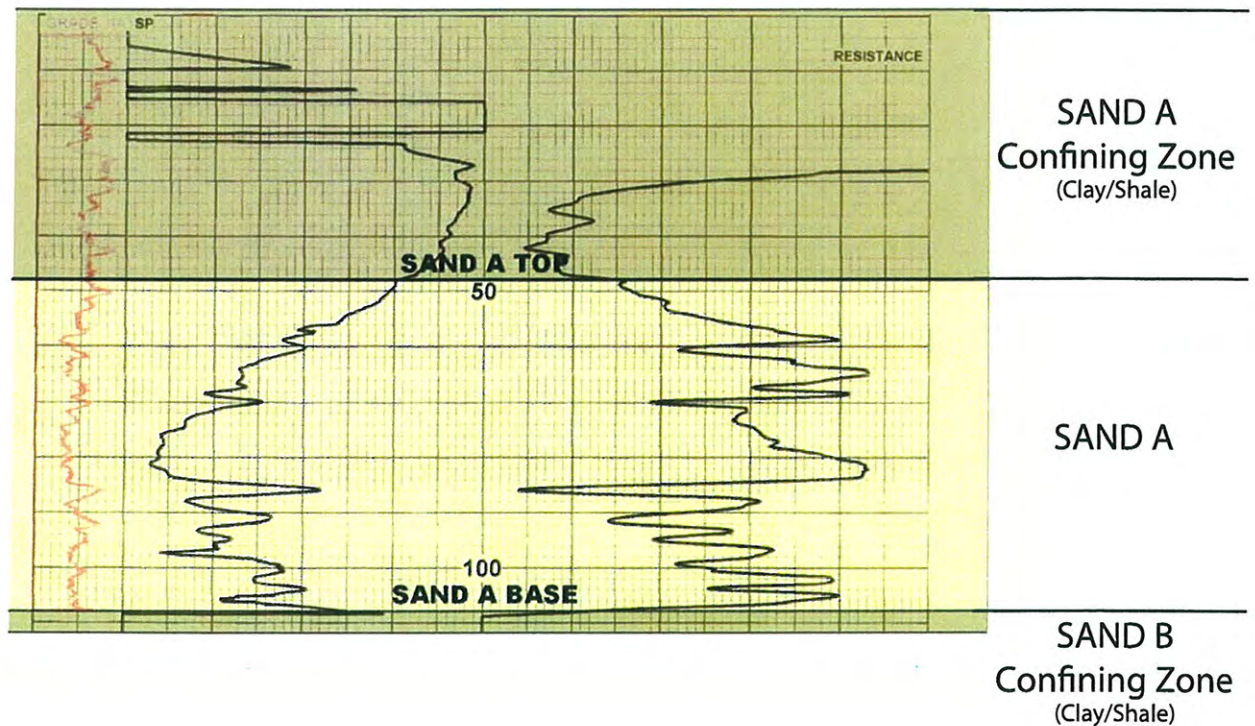




32201-OMW-9



TD 110 FT  
GL 228.3 FT

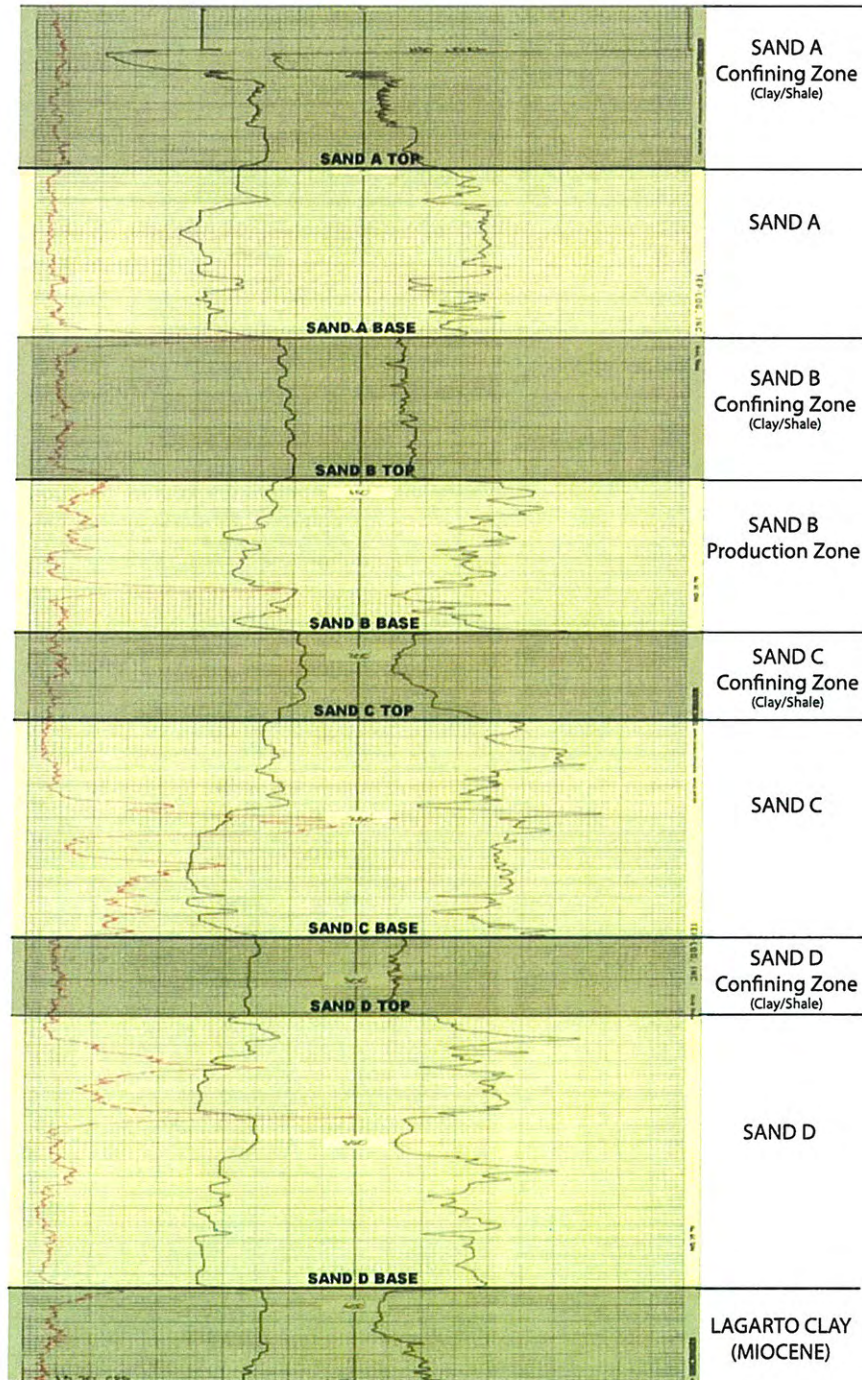




32201-38



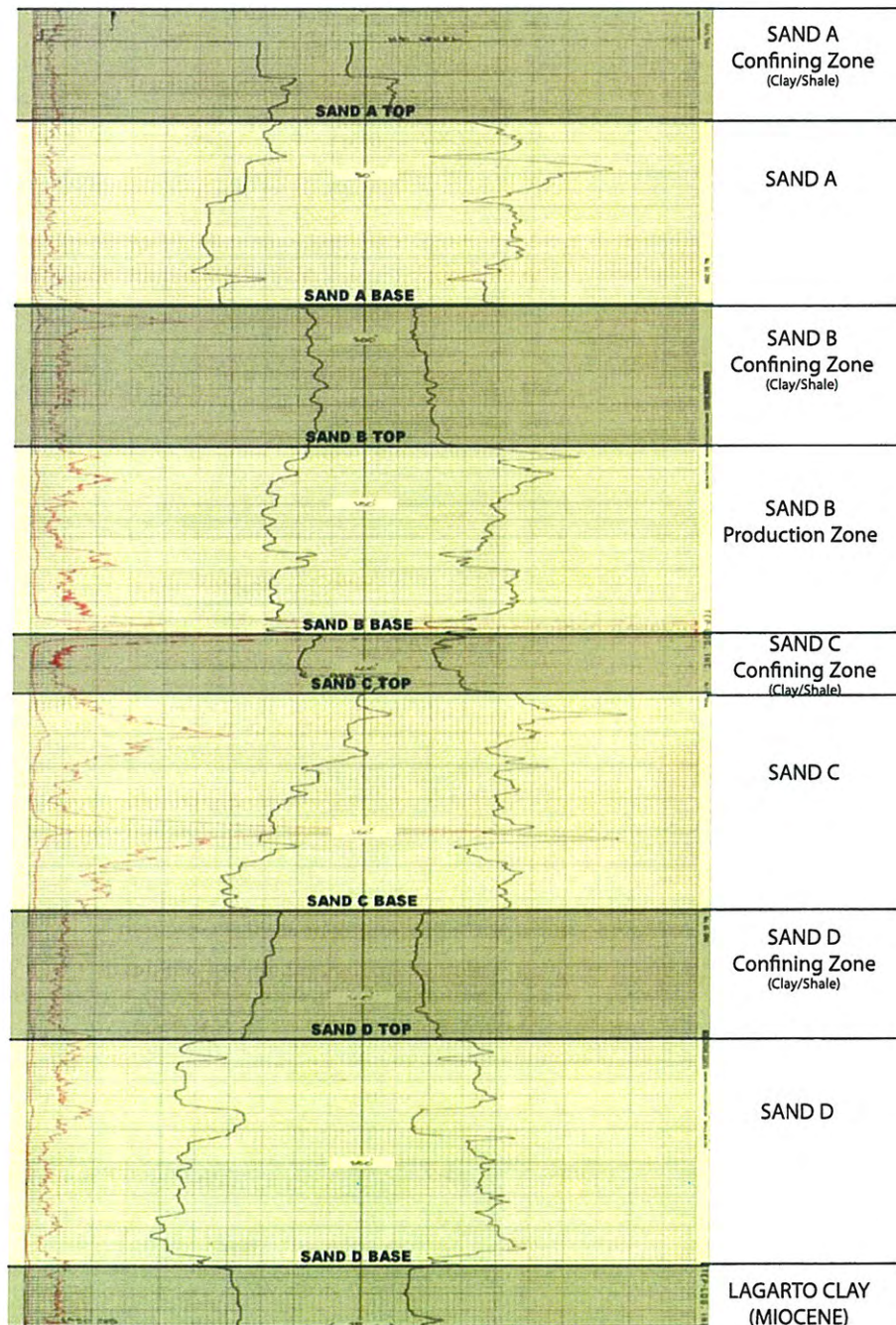
TD 424 FT  
GL 230.8 FT



32201-65



TD 400 FT  
GL 220.4 FT

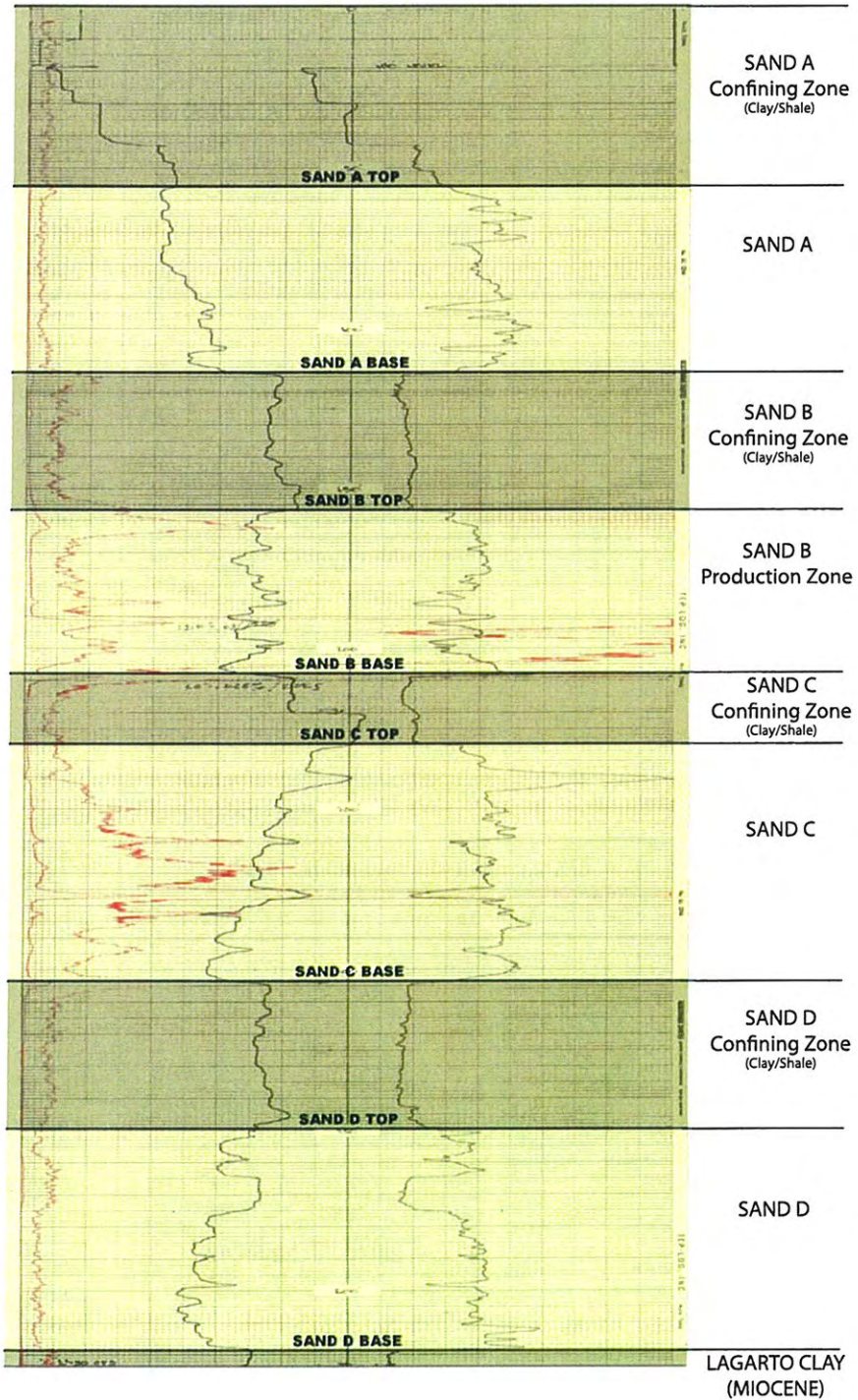




32201-66



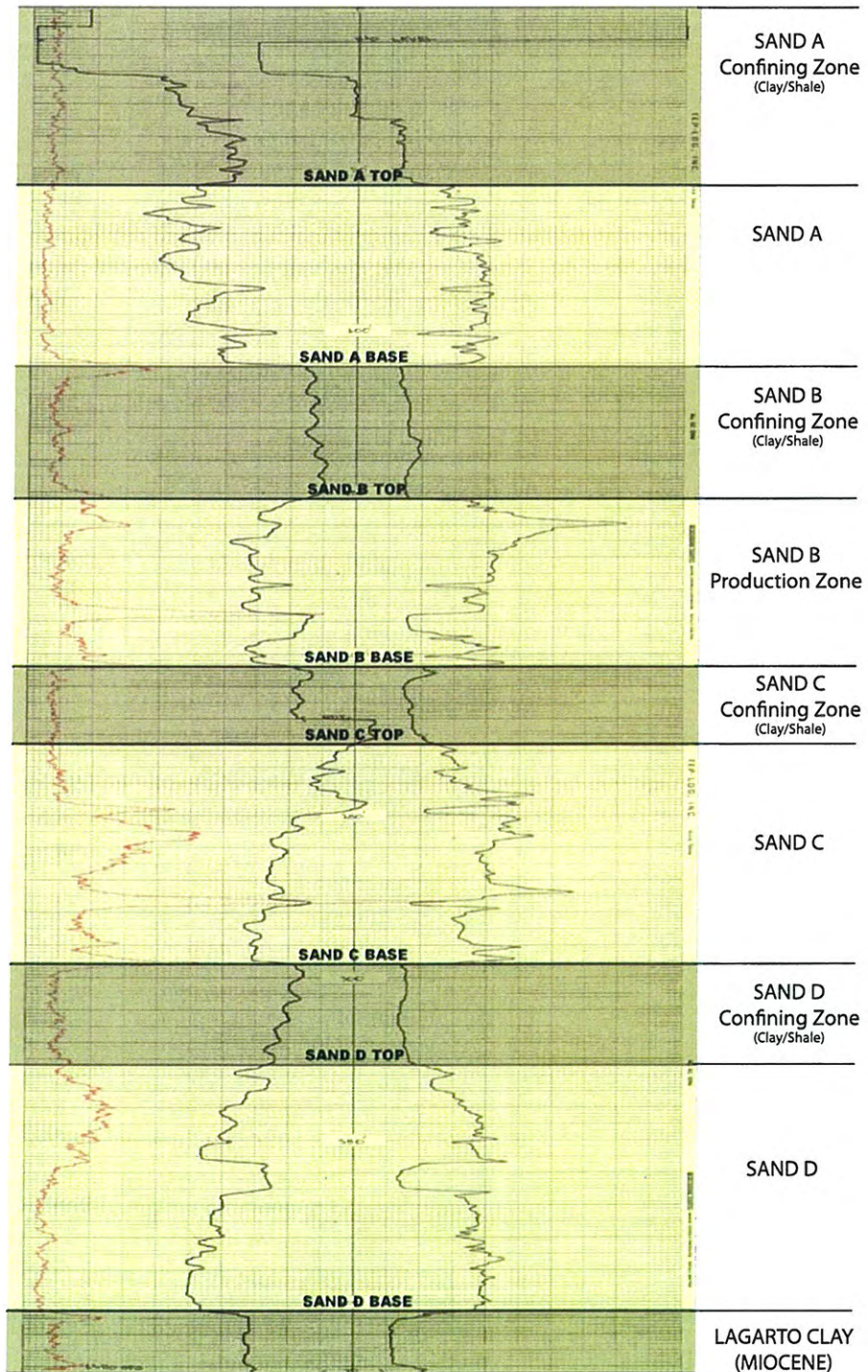
TD 424 FT  
GL 235.5 FT



32201-68



TD 422 FT  
GL 234.9 FT

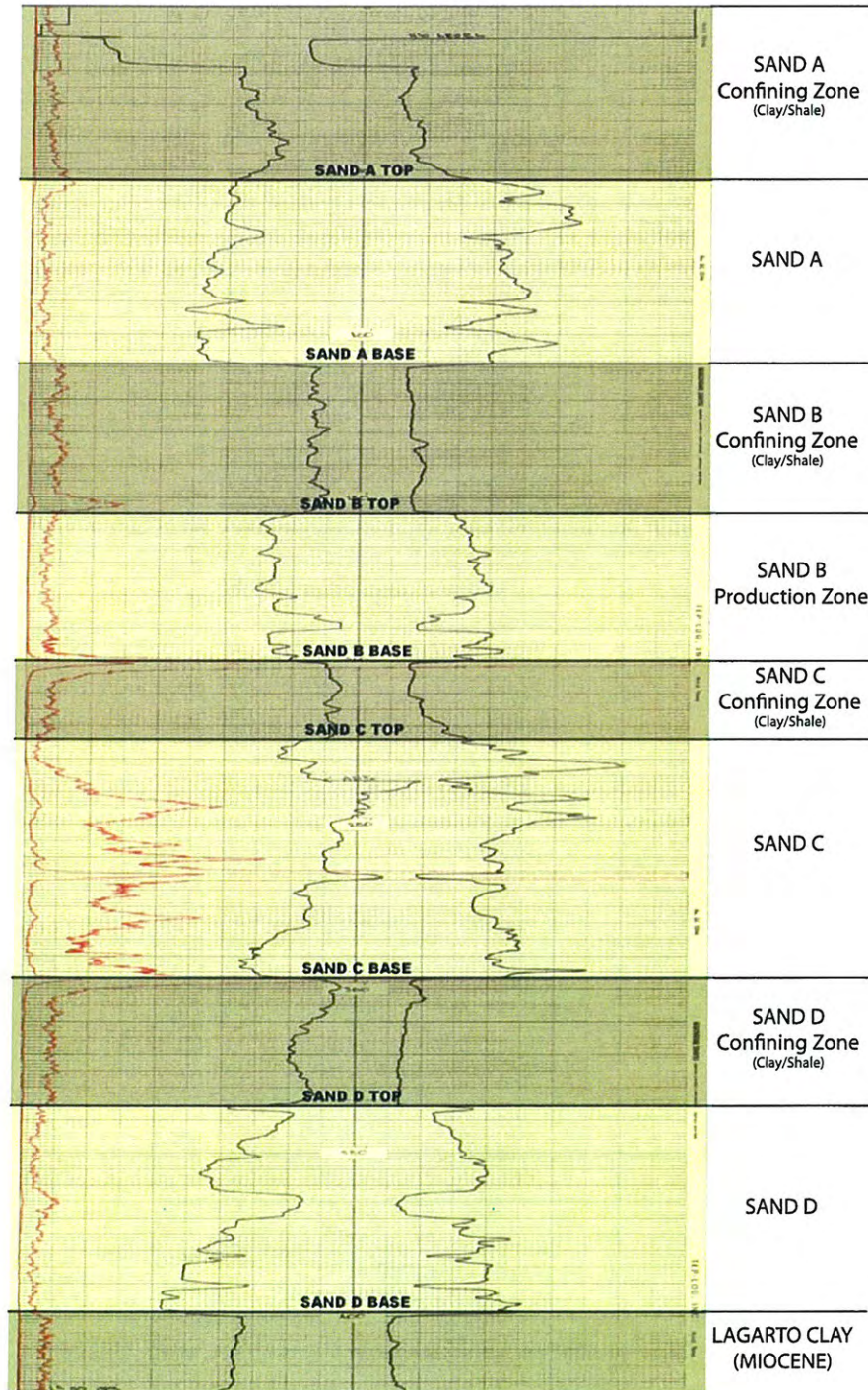




32201-80



TD 424 FT  
GL 231.9 FT

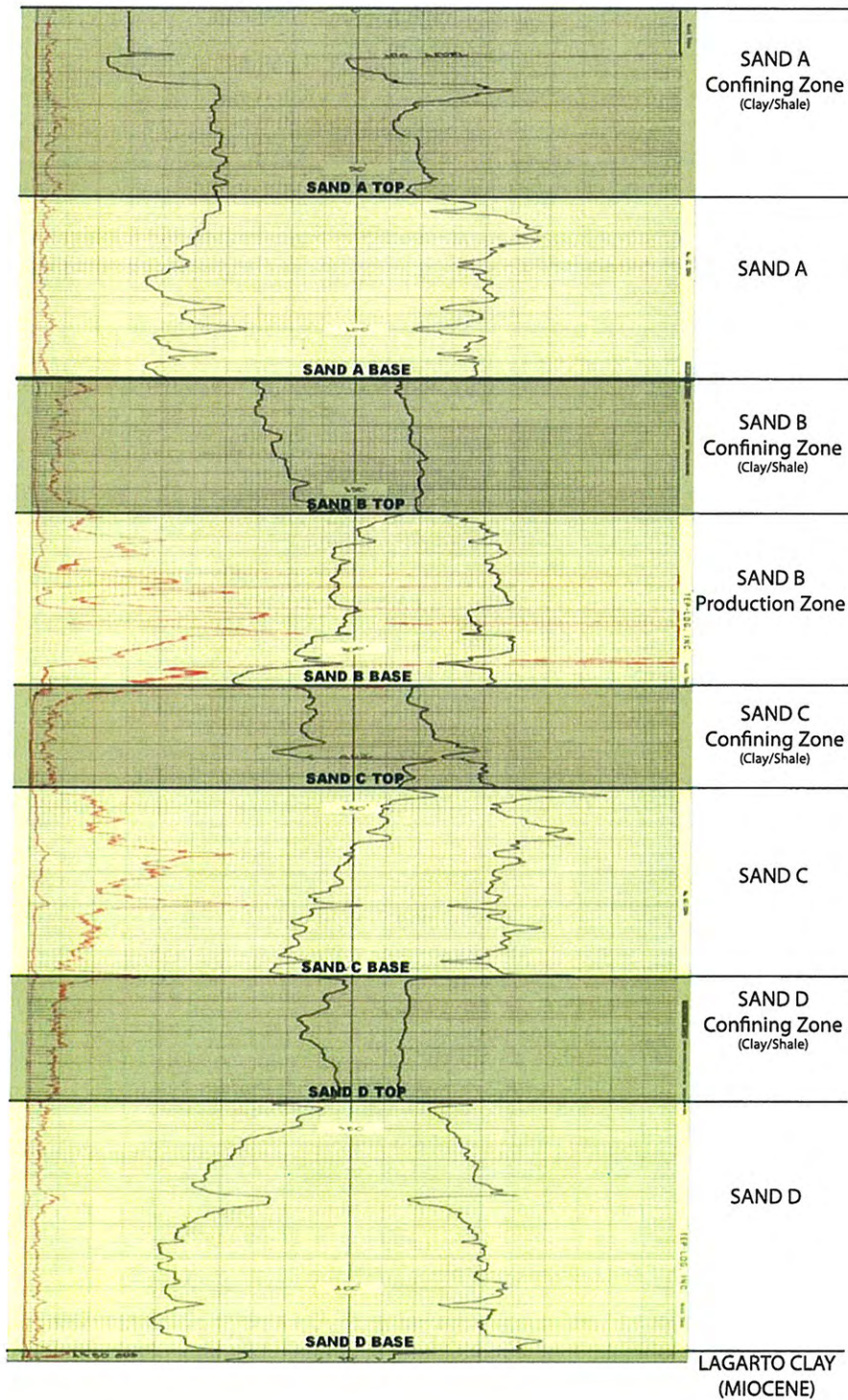




32201-84



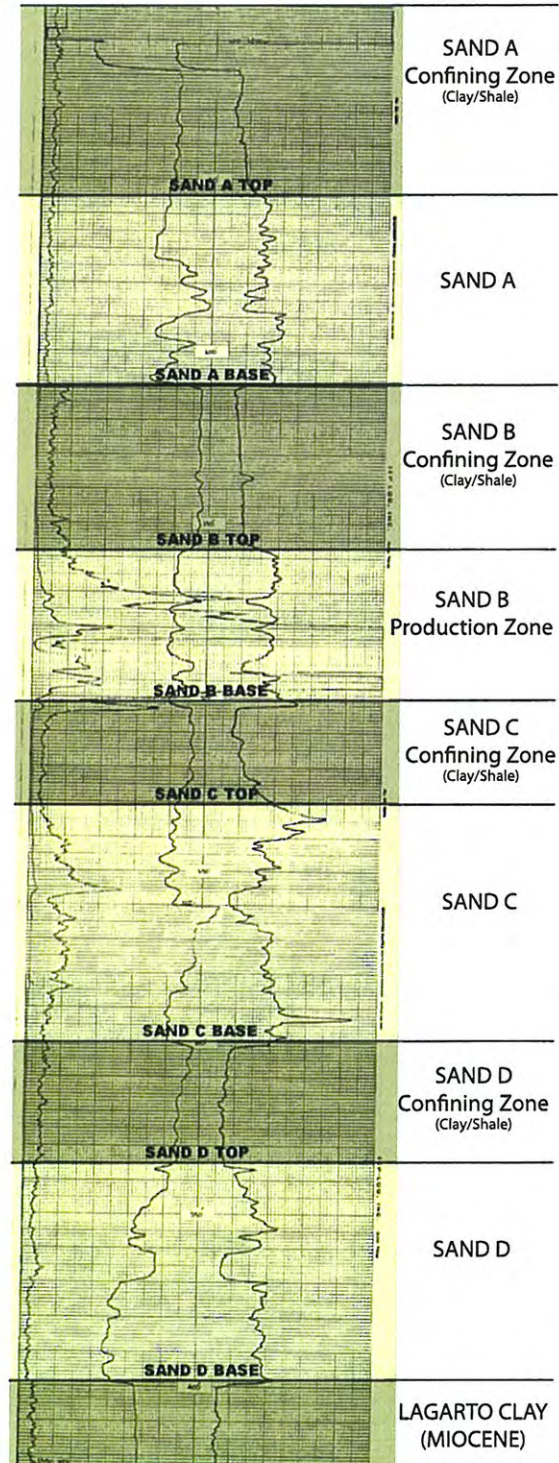
TD 423 FT  
GL 234.4 FT



32201-87



TD 425 FT  
GL 228.3 FT

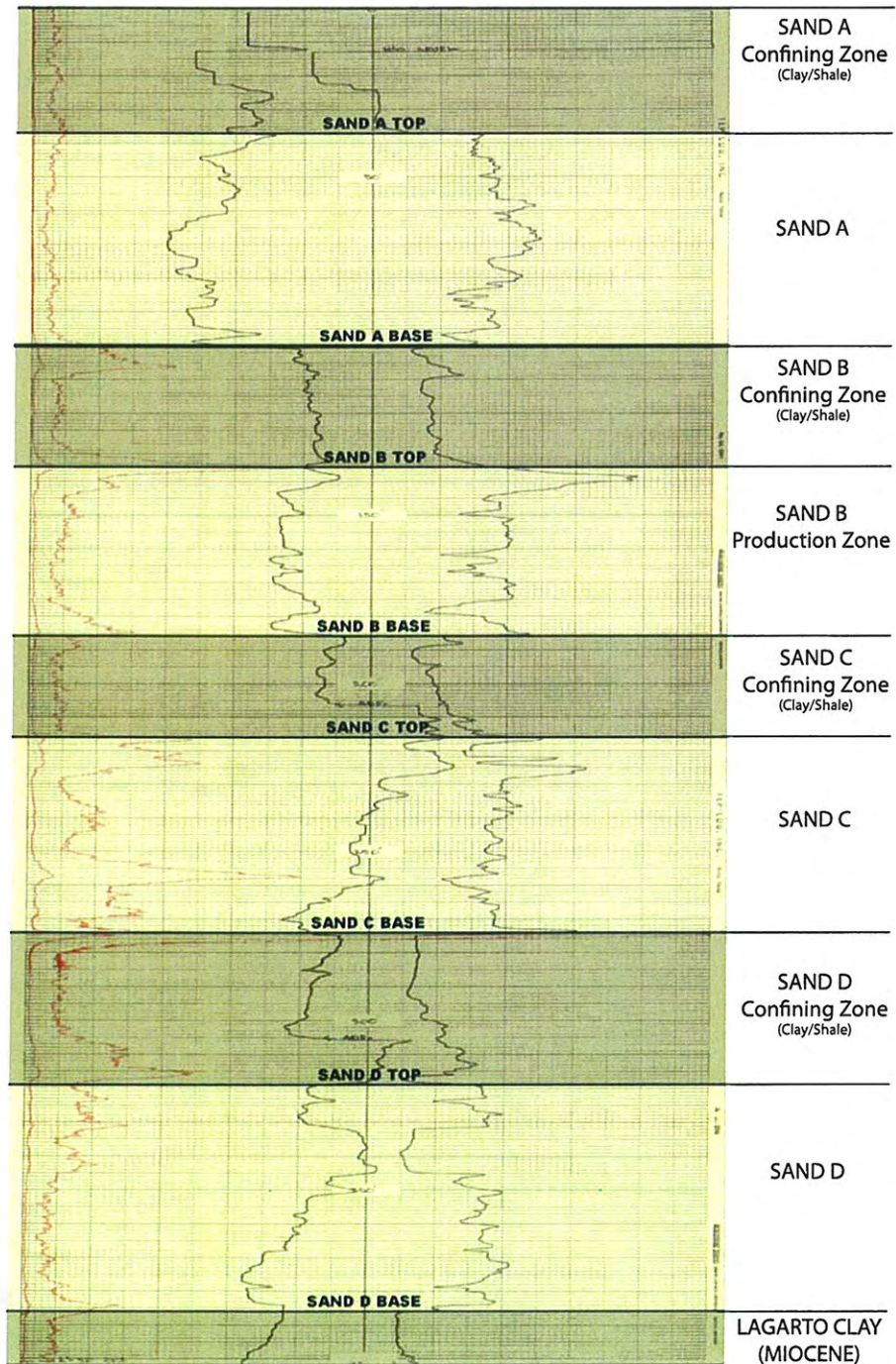




32201-90



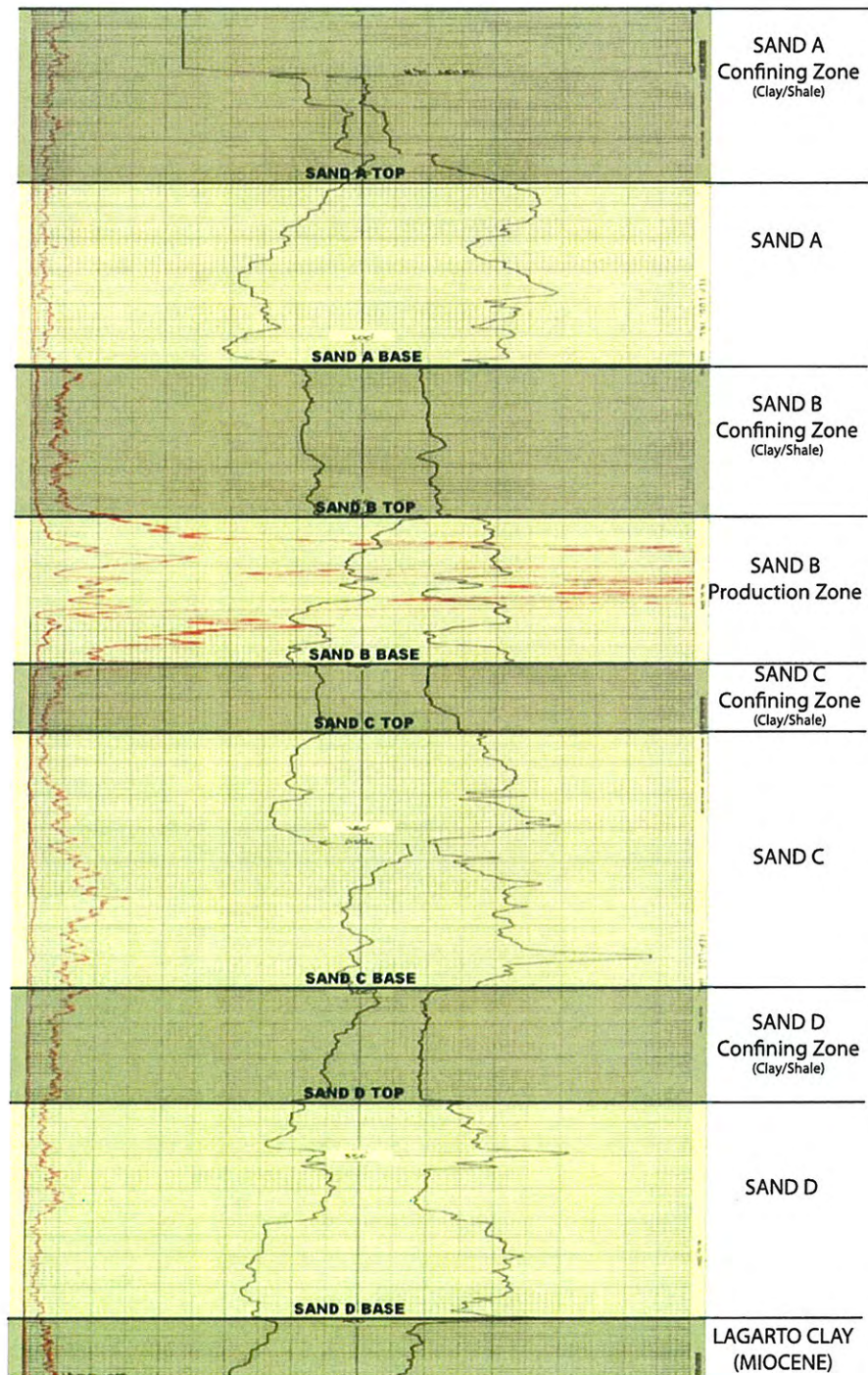
TD 402 FT  
GL 224.7 FT



32201-117



TD 419 FT  
GL 226.6 FT

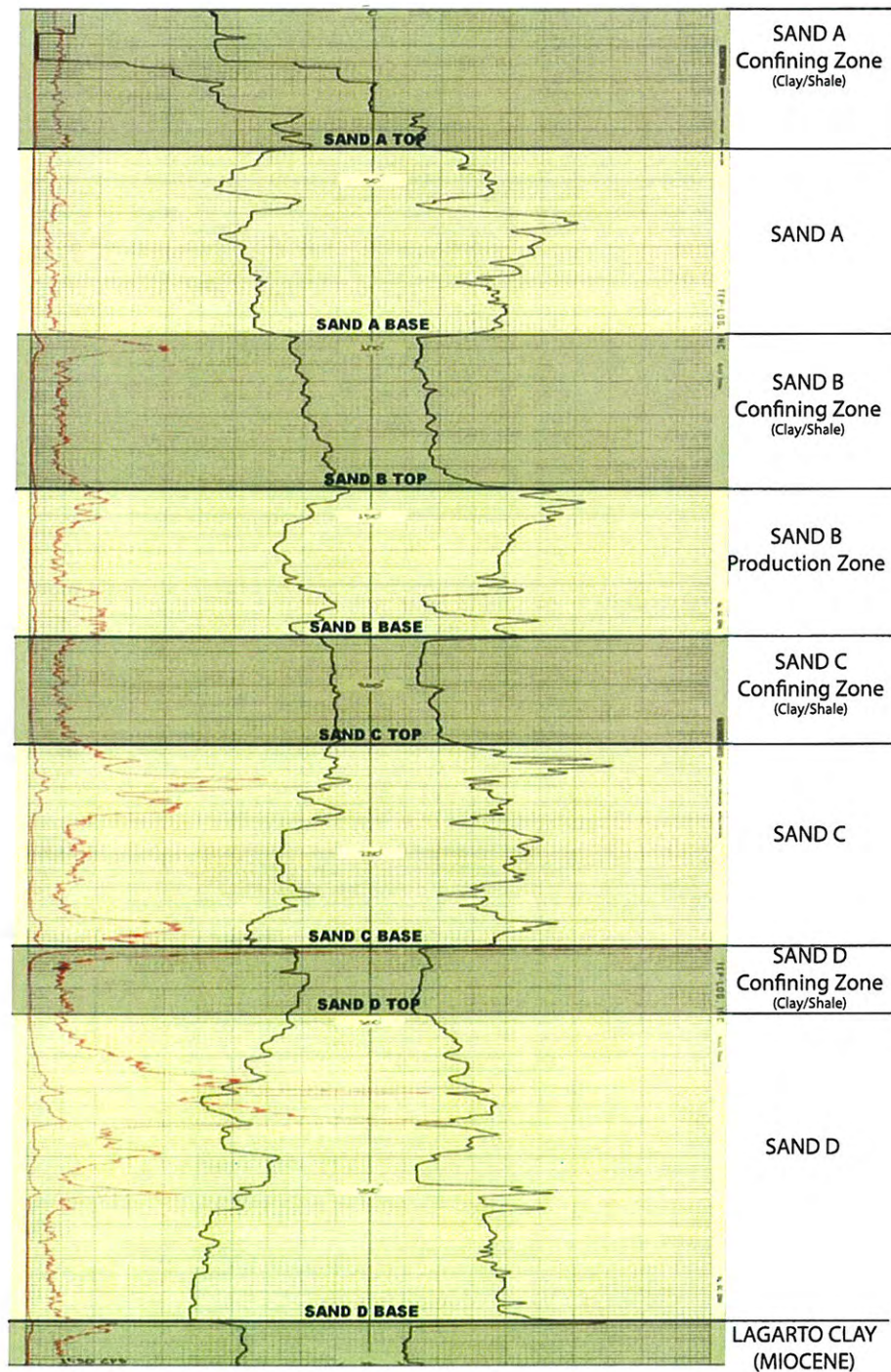




32201-120



TD 220 FT  
GL 227.1 FT

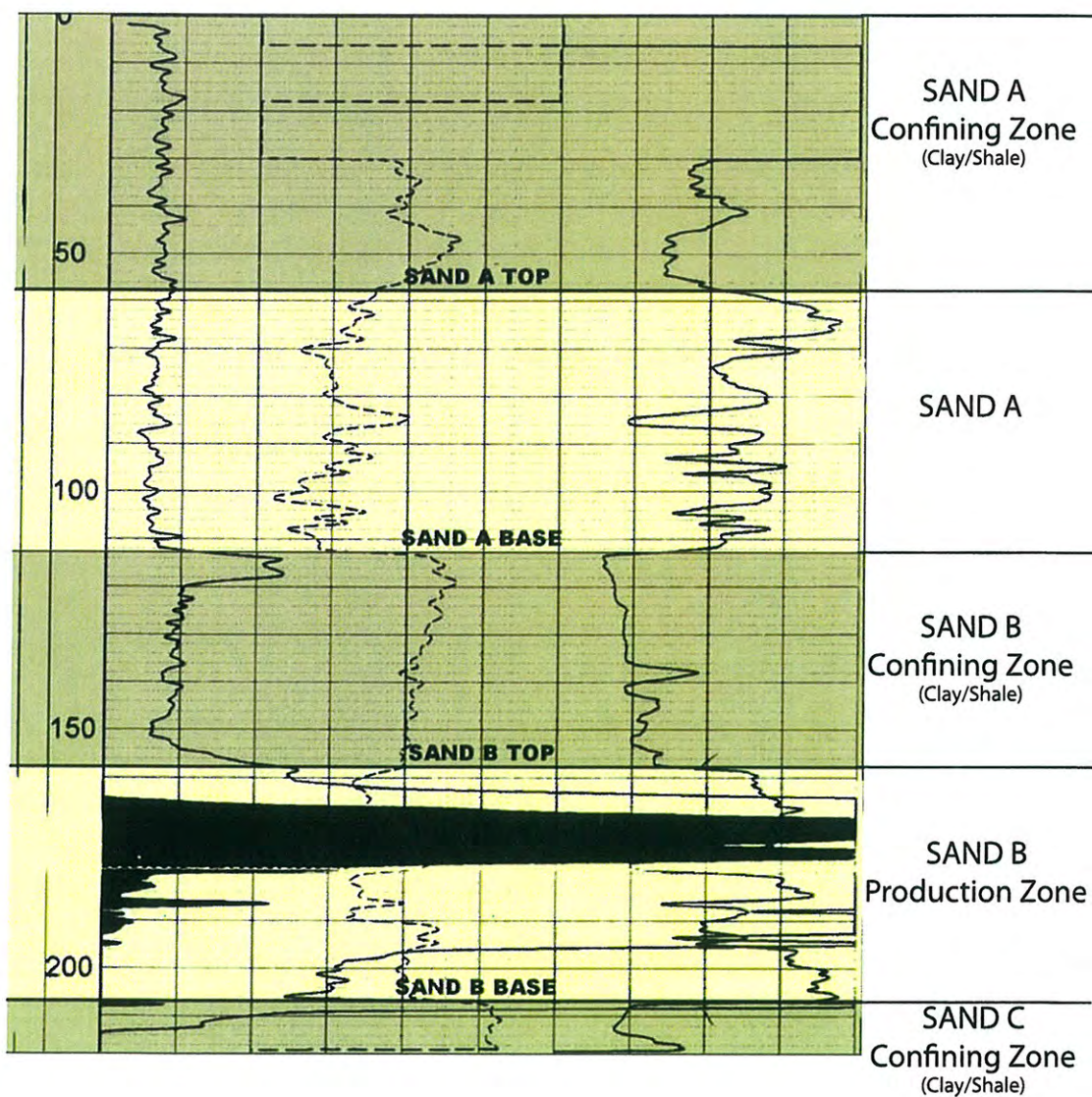




32201-N129



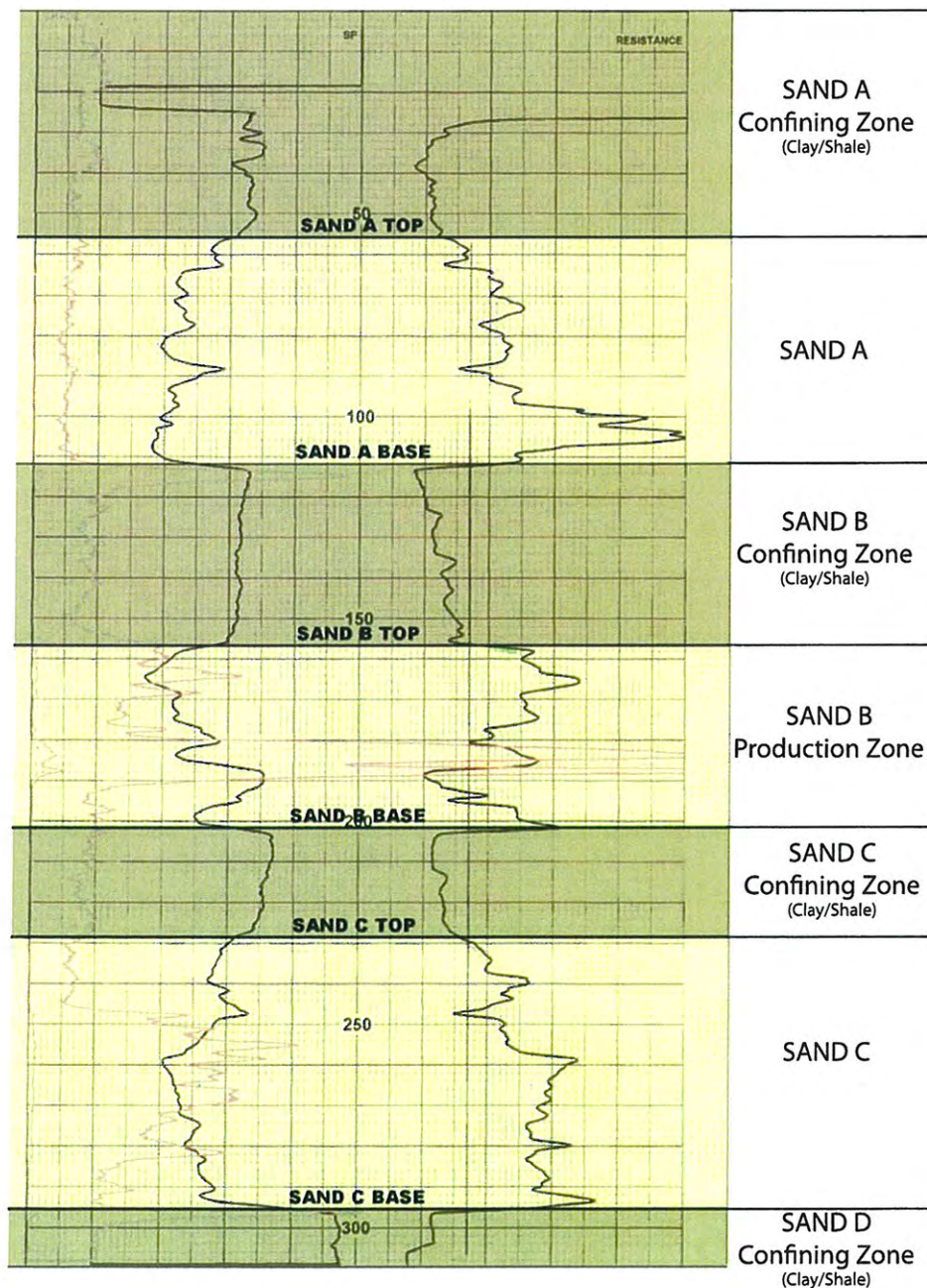
TD 218 FT  
GL 232.0 FT



32201-N192



TD 310 FT  
GL 235.3 FT

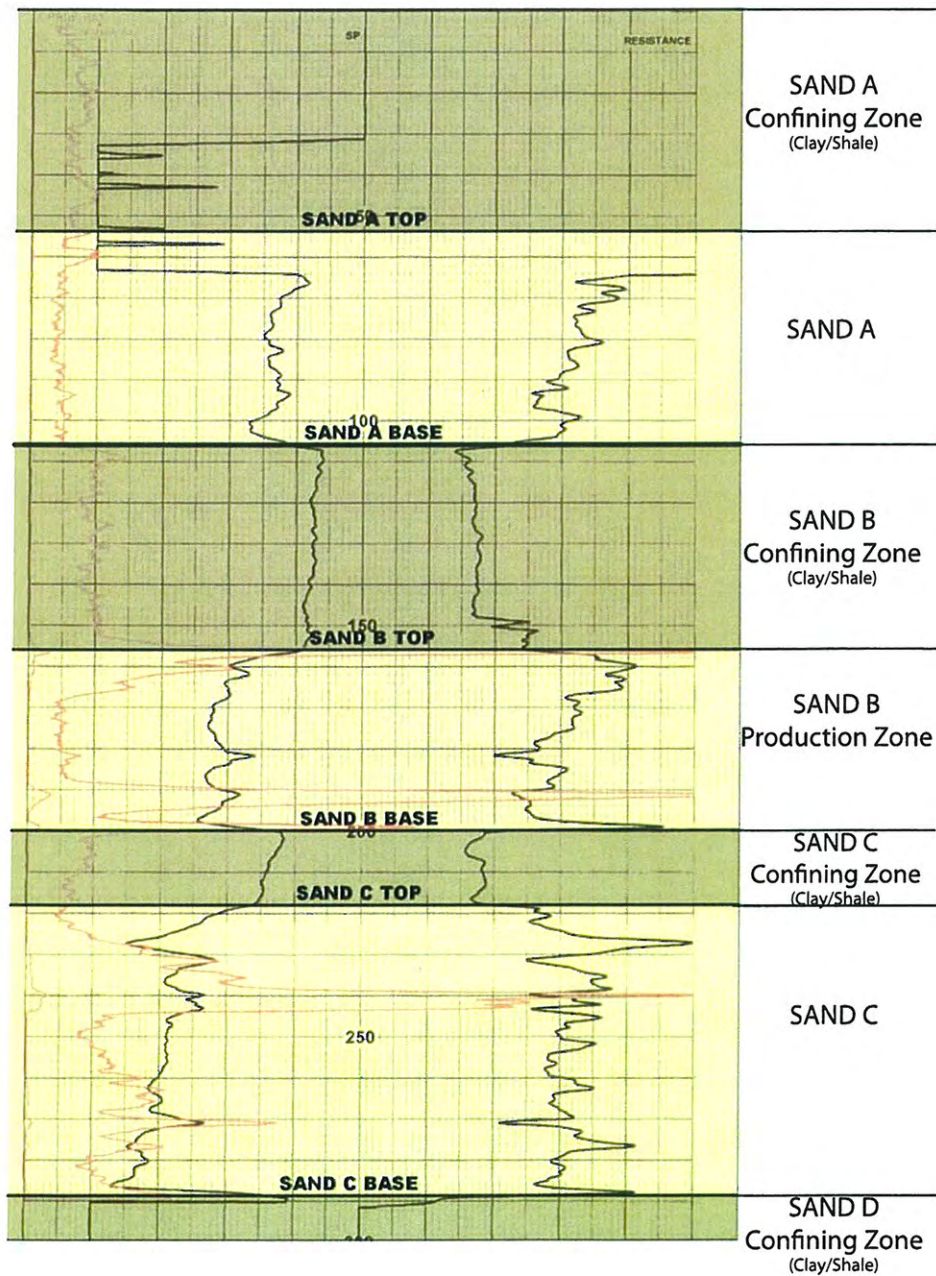




32201-N211



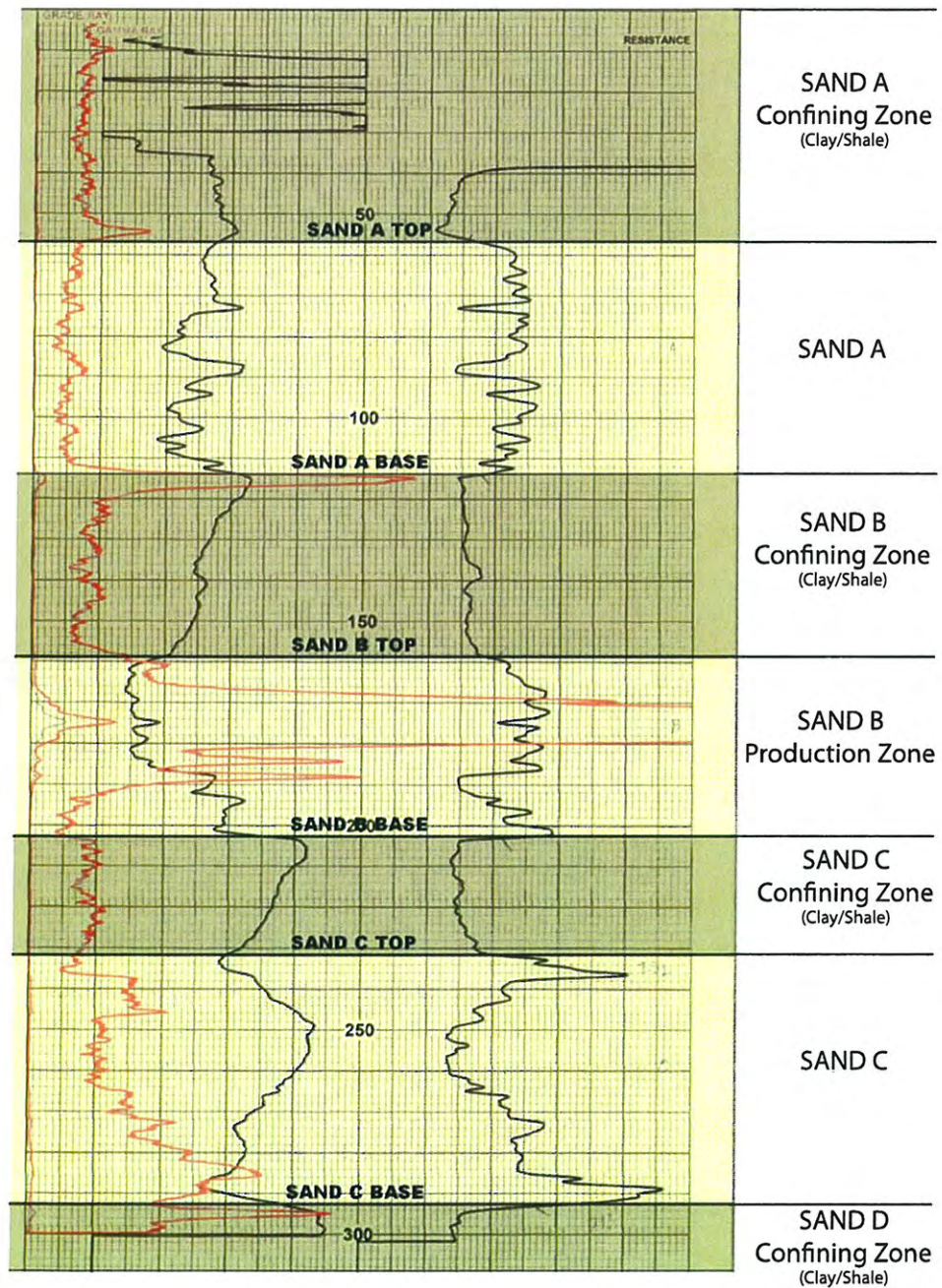
TD 300 FT  
GL 231.7 FT



32201-N212



TD 300 FT  
GL 233.8 FT

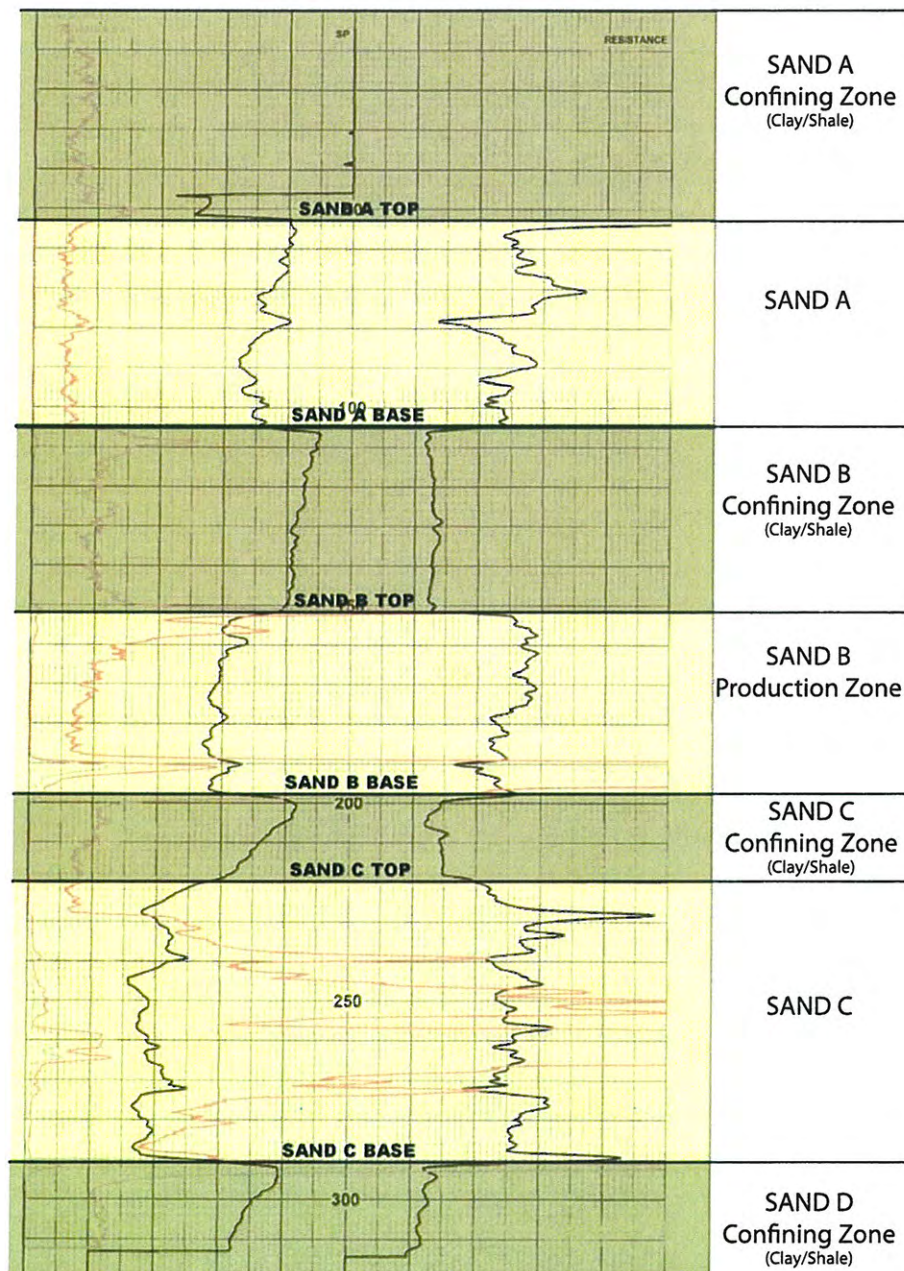




32201-N220



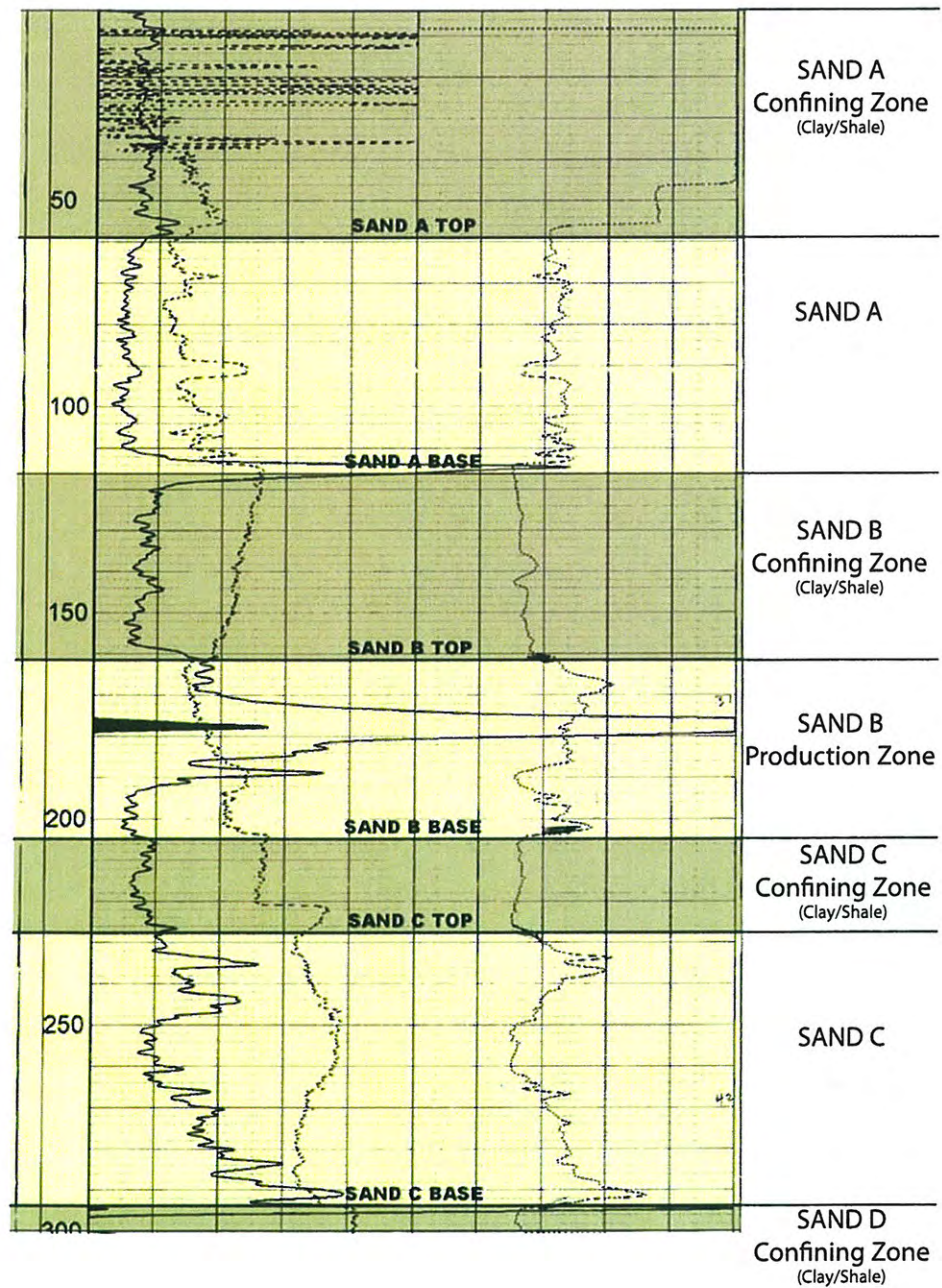
TD 314 FT  
GL 231.8 FT



32201-N251



TD 301 FT  
GL 234.3 FT

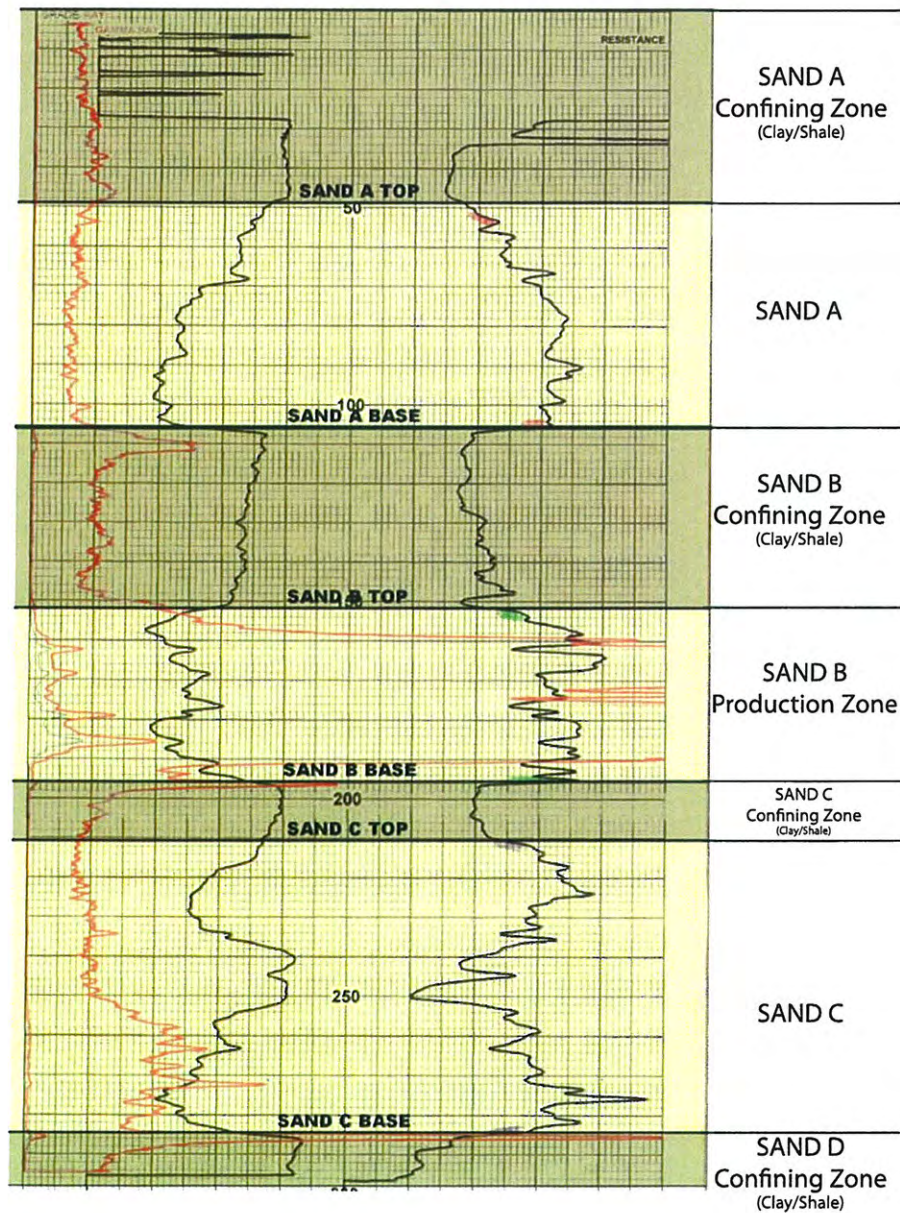




32201-N256



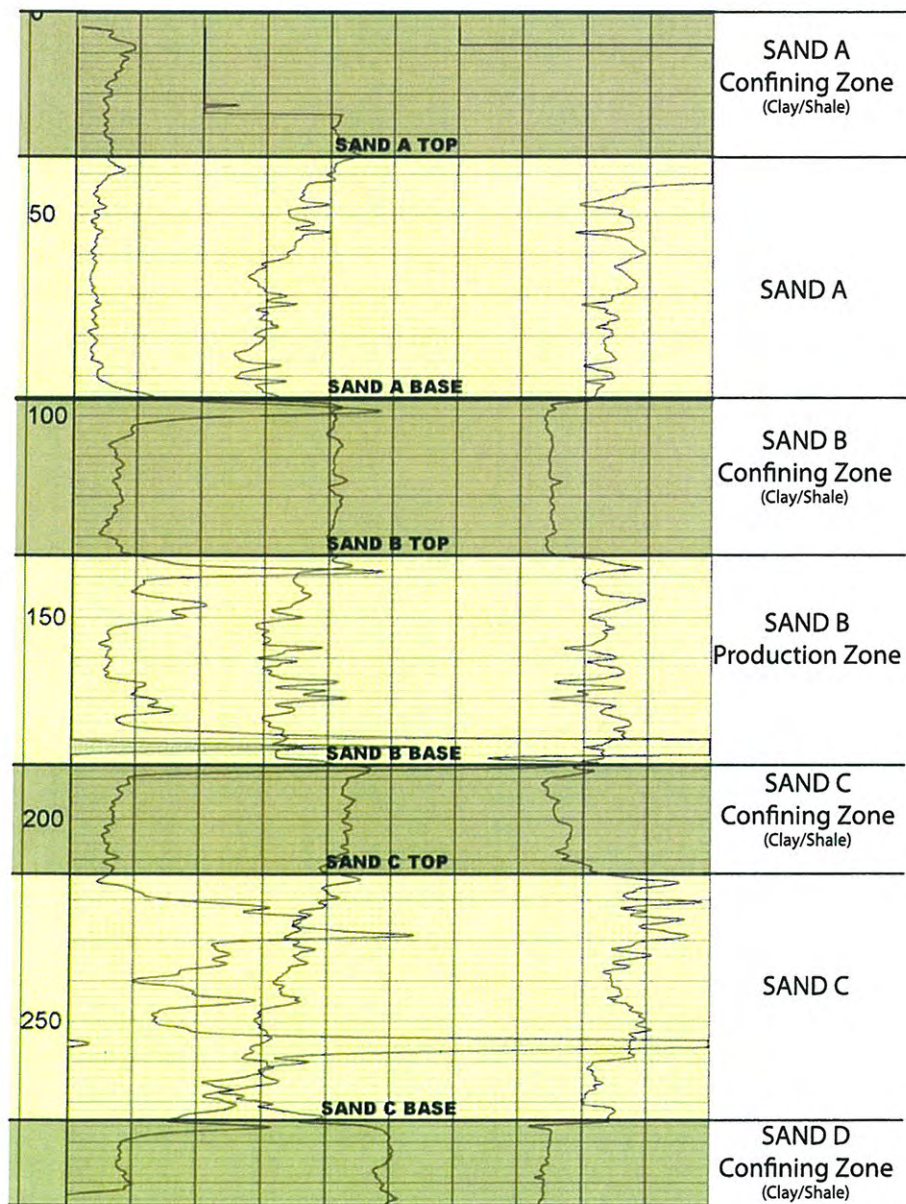
TD 300 FT  
GL 226.2 FT



32201-N41



TD 297 FT  
GL 222.9 FT

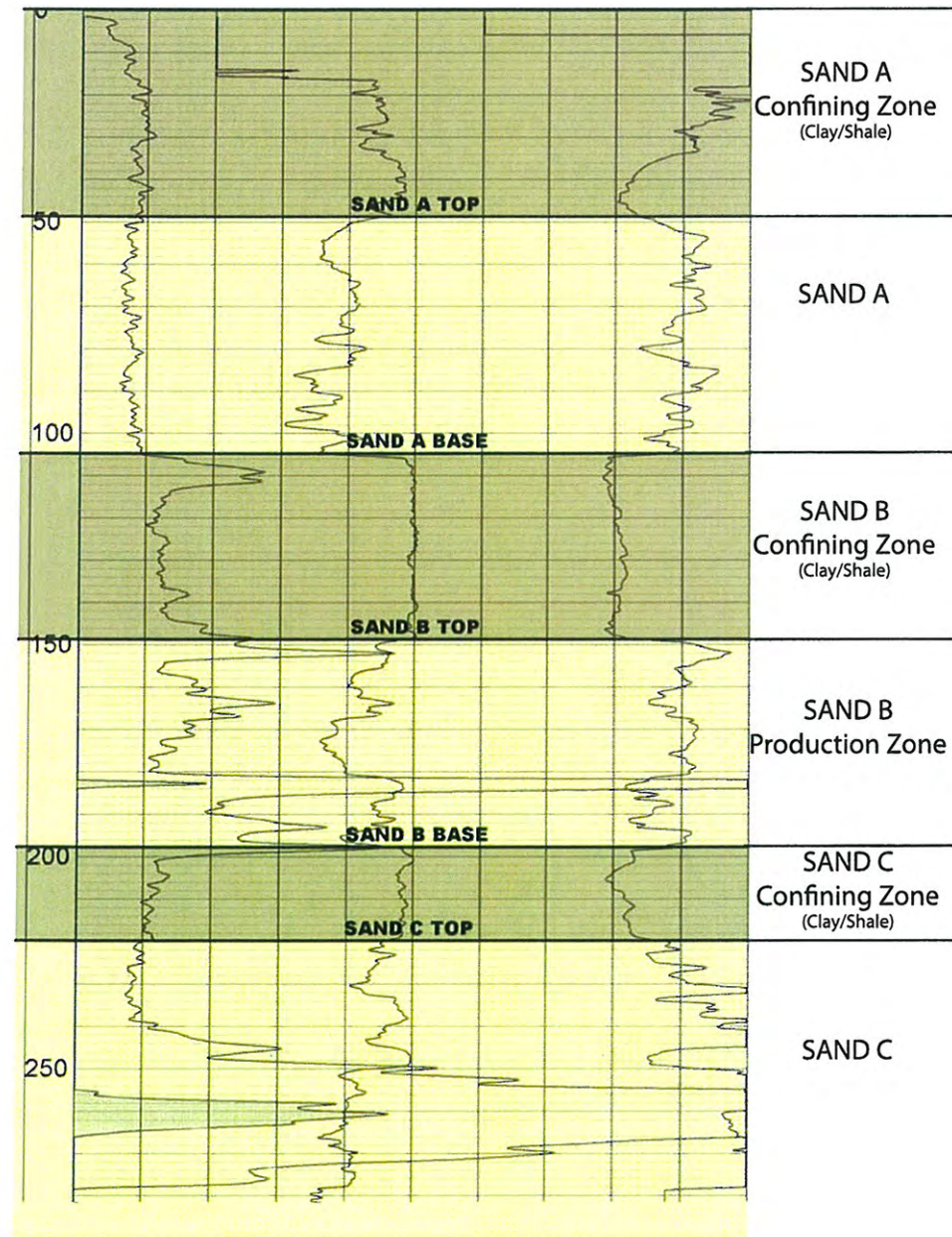




32201-N53



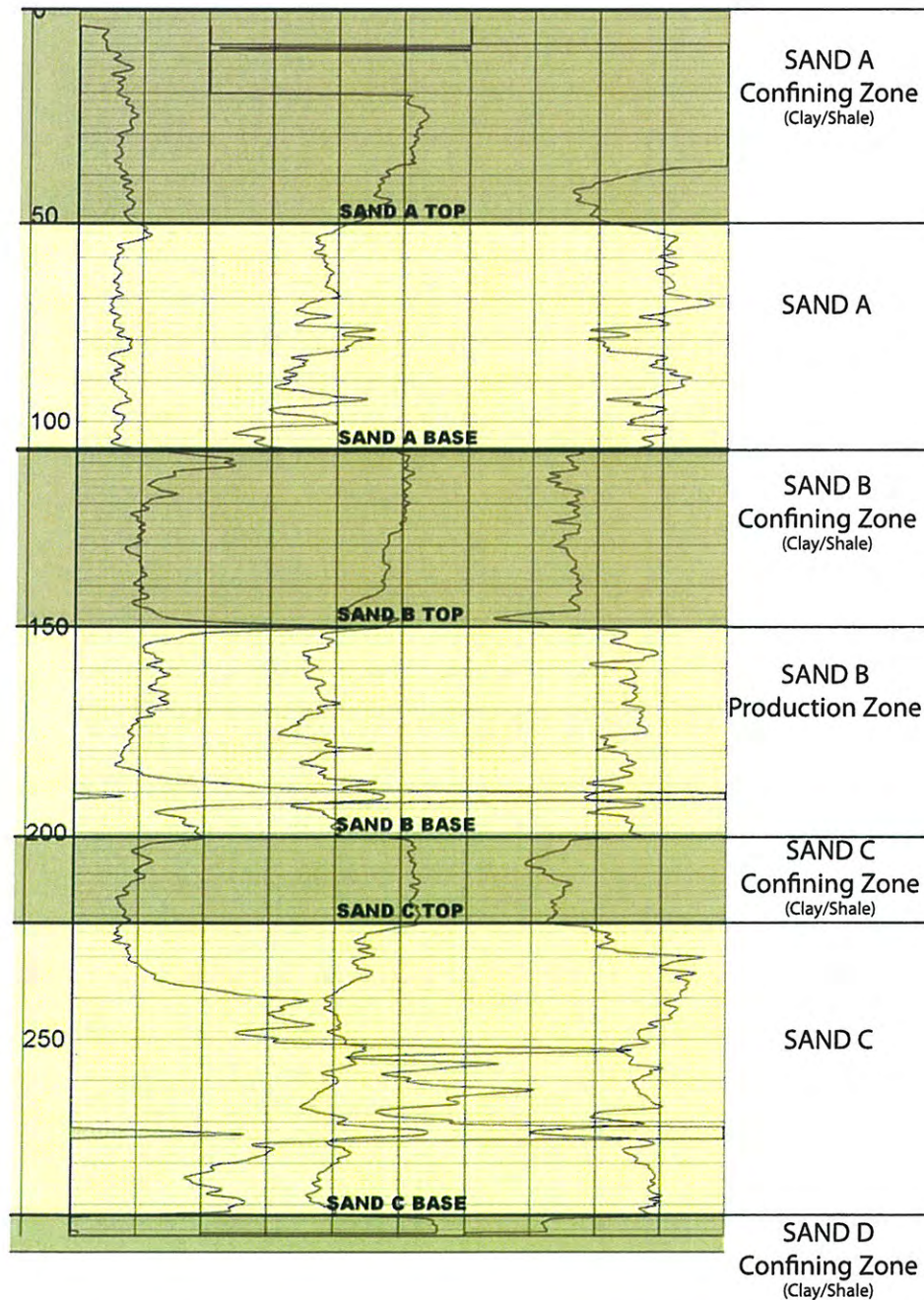
TD 283 FT  
GL 231.5 FT



32201-N55



TD 297 FT  
GL 232.4 FT

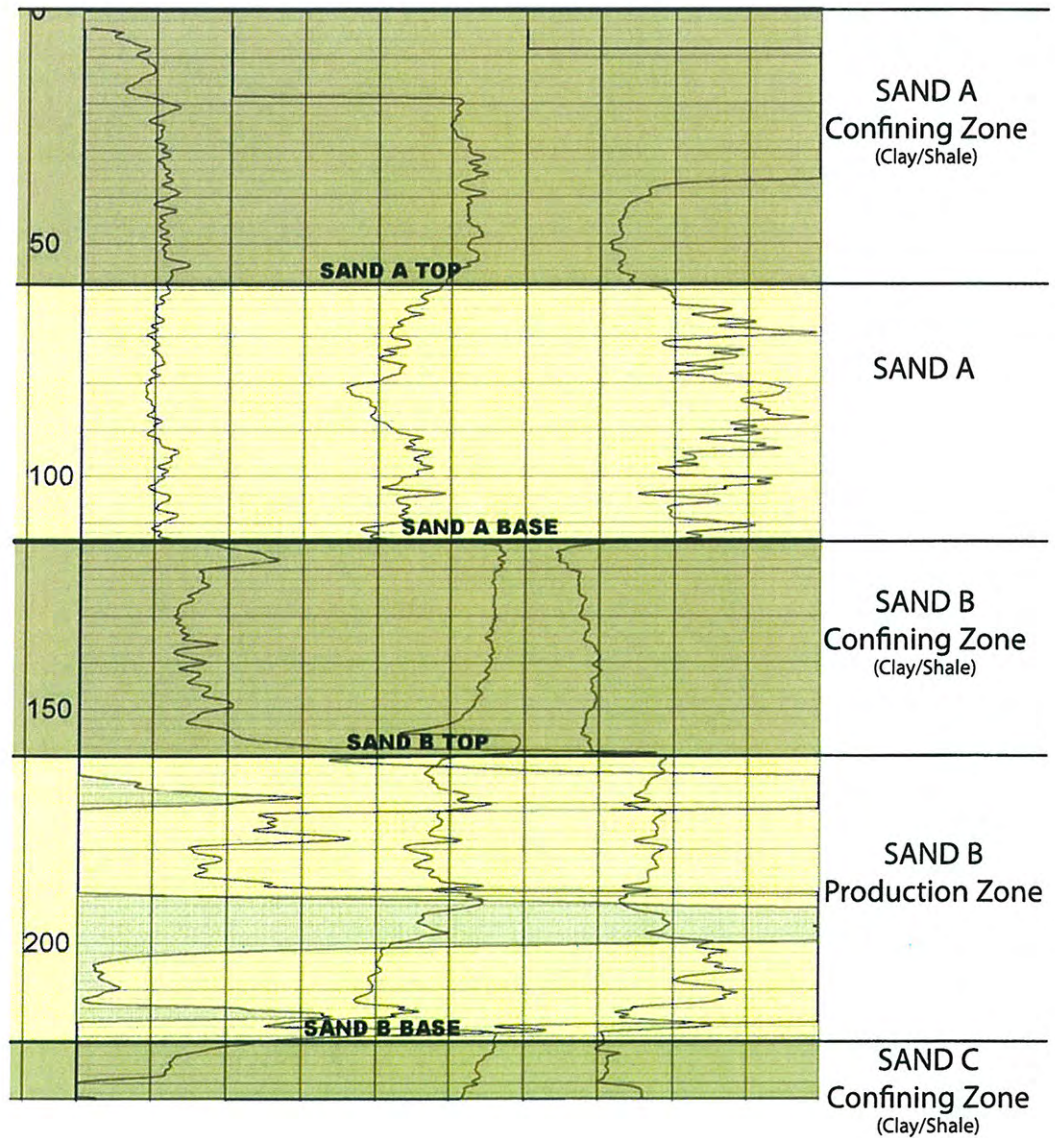




32201-N65



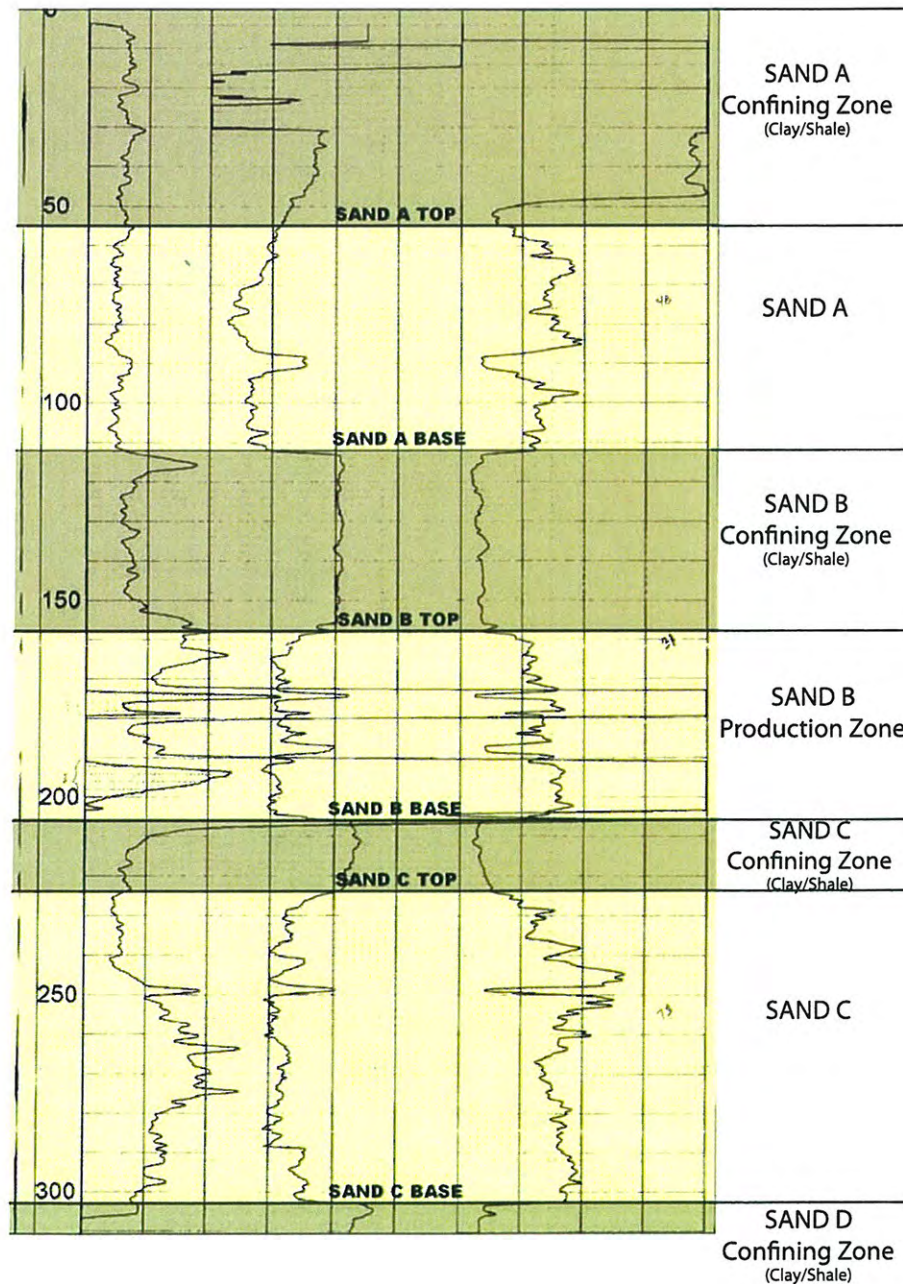
TD 234 FT  
GL 237.2 FT



32201-N82



TD 311 FT  
GL 231.3 FT

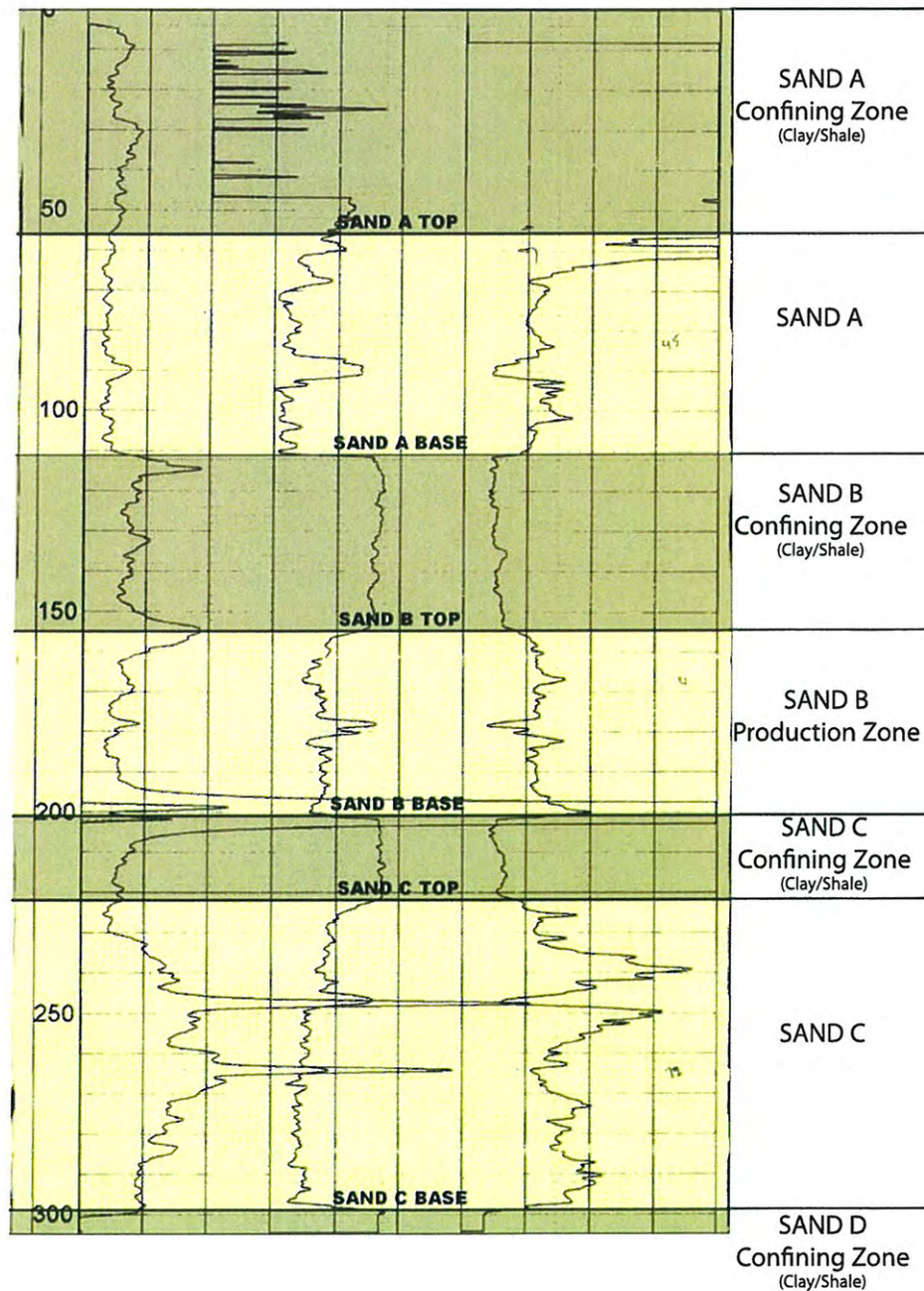




32201-N83



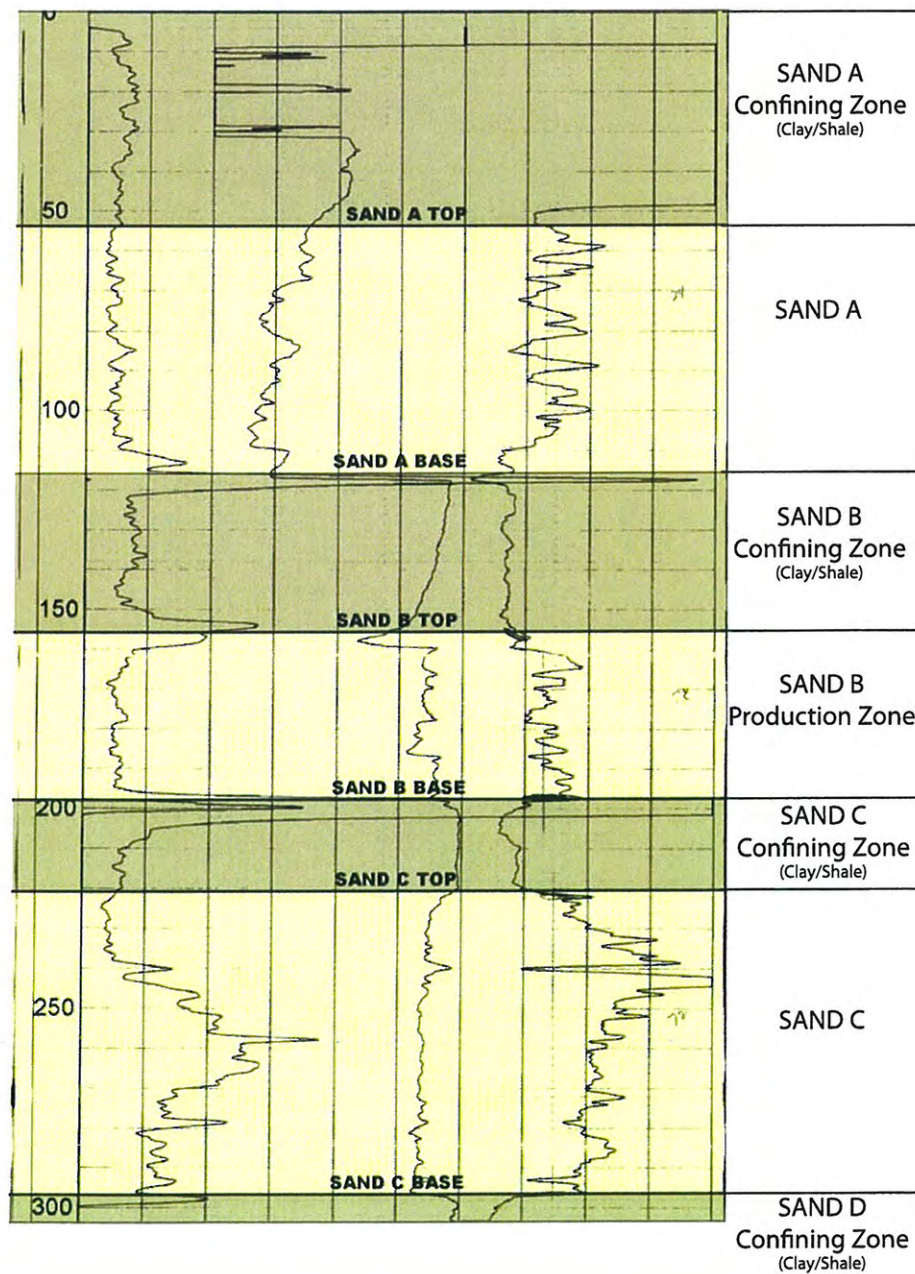
TD 305 FT  
GL 230.5 FT



32201-N84



TD 304 FT  
GL 229.8 FT



## COMPLETION AND RECOMPLETION REPORT

WELL NUMBER	PTW-1
LEASE	BRAQUET
AREA	WEESATCHE
HOLE DIAMETER	9.875"
CASING DIAMETER	5"
REAMED DIAMETER	8"

DATE April 14, 2008  
FIELD SUPV. Wentz/Bairu  
CONTRACTOR ALL TEXAS

### LINER DATA

PACKER TYPE	Fig. K	NUMBER	2
LINER DIAMETER	3"		
SCREEN TYPE	REGULAR	SLOT	0.01

GRAVEL

SIZE	N/A		
SACKS CALCULATED	N/A	TAKEN	N/A

COMMENTS \_\_\_\_\_

TAGGED TOP OF J	150.25
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### USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
CONE \_\_\_\_\_  
BLADE 8"

CASING T.D.	<u>158</u>	FT.
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UNDER- REAMED INTERVAL	159 FT.
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DRILLED T.D.	190	FT.
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### LINER MEASUREMENTS

			FEET	FROM	TO	
TOP ASS'Y	J-Collar		2.75	150.25	153.00	
	K-Packer					
	Steel Nipple					
	K-Packer					
STEEL BLANK				7	153.00	160.00
SCREEN				20	160.00	180.00
SAND TRAP	3" Casing PVC					
	3"X2" Reducer PVC					
	2" Nipple PVC					
	2" Check Valve PVC		5.00	180.00	185.00	
	2" Nipple PVC					
	2" Check Valve PVC					

## COMPLETION AND RECOMPLETION REPORT

WELL NUMBER	PTW-2
LEASE	BRAQUET
AREA	WEESATCHE
HOLE DIAMETER	9.875"
CASING DIAMETER	5"
REAMED DIAMETER	8"

DATE April 9, 2008  
FIELD SUPV. Wentz/Bairu  
CONTRACTOR ALL TEXAS

### LINER DATA

PACKER TYPE	Fig. K	NUMBER	2
LINER DIAMETER	3"		
SCREEN TYPE	REGULAR	SLOT	0.01

## GRAVEL

SIZE	N/A			
SACKS CALCULATED	N/A		TAKEN	N/A

COMMENTS

TAGGED TOP OF J	172.25
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### USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
CONE \_\_\_\_\_  
BLADE 8"

CASING T.D.	179	FT.
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UNDER- REAMED INTERVAL	<u>180</u> FT.
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DRILLED T.D.	211 FT.
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## LINER MEASUREMENTS

		FEET	FROM	TO
TOP ASS'Y	J-Collar K-Packer Steel Nipple K-Packer	2.75	172.25	175.00
STEEL BLANK		7	175.00	182.00
SCREEN		20	182.00	202.00
SAND TRAP	3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	202.00	207.00



# COMPLETION AND RECOMPLETION REPORT

WELL NUMBER PTW-3  
 LEASE BRAQUET  
 AREA WEESATCHE  
 HOLE DIAMETER 9.875"  
 CASING DIAMETER 5"  
 REAMED DIAMETER 8"

DATE April 15, 2008  
 FIELD SUPV. Wentz/Bairu  
 CONTRACTOR ALL TEXAS

## LINER DATA

PACKER TYPE Fig. K NUMBER 2  
 LINER DIAMETER 3"  
 SCREEN TYPE REGULAR SLOT 0.01

## GRAVEL

SIZE N/A  
 SACKS CALCULATED N/A TAKEN N/A

COMMENTS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
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 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

TAGGED TOP OF J 168.25

## USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
 CONE \_\_\_\_\_  
 BLADE 8"

CASING T.D. 174 FT.  
 UNDER-REAMED INTERVAL 175 FT.  
204 FT.  
 DRILLED T.D. 206 FT.

## LINER MEASUREMENTS

		FEET	FROM	TO
TOP ASS'Y	J-Collar K-Packer Steel Nipple K-Packer	2.75	168.25	171.00
STEEL BLANK		7	171.00	178.00
SCREEN		20	178.00	198.00
SAND TRAP	3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	198.00	203.00

## COMPLETION AND RECOMPLETION REPORT

WELL NUMBER	PTW-4
LEASE	BRAQUET
AREA	WEESATCHE
HOLE DIAMETER	9.875"
CASING DIAMETER	5"
REAMED DIAMETER	8"

DATE April 16, 2008  
FIELD SUPV. Wentz/Bairu  
CONTRACTOR ALL TEXAS

### LINER DATA

PACKER TYPE	Fig. K	NUMBER	2
LINER DIAMETER	3"		
SCREEN TYPE	REGULAR	SLOT	0.01

GRAVEL

SIZE	N/A
SACKS CALCULATED	N/A
TAKEN	N/A

**COMMENTS**

TAGGED TOP OF J	170.25
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### USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
CONE \_\_\_\_\_  
BLADE 8" \_\_\_\_\_

CASING T.D. 176 FT.

UNDER- REAMED INTERVAL	<u>177</u> FT.
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DRILLED T.D. 208 FT.

### LINER MEASUREMENTS

		FEET	FROM	TO
TOP ASS'Y	J-Collar			
	K-Packer			
	Steel Nipple	2.75	170.25	173.00
	K-Packer			
STEEL BLANK				
		7	173.00	180.00
SCREEN				
		20	180.00	200.00
SAND TRAP	3" Casing PVC			
	3"X2" Reducer PVC			
	2" Nipple PVC			
	2" Check Valve PVC	5.00	200.00	205.00
	2" Nipple PVC			
	2" Check Valve PVC			

## COMPLETION AND RECOMPLETION REPORT

WELL NUMBER	PTW-5
LEASE	BRAQUET
AREA	WEESATCHE
HOLE DIAMETER	9.875"
CASING DIAMETER	5"
REAMED DIAMETER	8"

DATE April 15, 2008  
FIELD SUPV. Wentz/Bairu  
CONTRACTOR ALL TEXAS

## HOLE MEASUREMENTS

REAMER:  
CONE \_\_\_\_\_  
BLADE 8"

### LINER DATA

PACKER TYPE	Fig. K	NUMBER	2
LINER DIAMETER	3"		
SCREEN TYPE	REGULAR	SLOT	0.01

GRAVEL

SIZE	N/A		
SACKS CALCULATED	N/A	TAKEN	N/A

COMMENTS \_\_\_\_\_

CASING T.D.	175	FT.
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UNDER- REAMED INTERVAL	<u>176</u> FT.
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DRILLED T.D.	207	FT.
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### LINER MEASUREMENTS

TAGGED TOP OF J	169.25
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### USEFUL DATA

			FEET	FROM	TO
TOP ASS'Y	J-Collar K-Packer Steel Nipple K-Packer		2.75	169.25	172.00
STEEL BLANK			7	172.00	179.00
SCREEN			20	179.00	199.00
SAND TRAP	3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC		5.00	199.00	204.00

# COMPLETION AND RECOMPLETION REPORT

WELL NUMBER PTW-6  
LEASE BRAQUET  
AREA WEESATCHE  
HOLE DIAMETER 9.875"  
CASING DIAMETER 5"  
REAMED DIAMETER 8"

DATE April 16, 2008  
FIELD SUPV. Wentz/Bairu  
CONTRACTOR ALL TEXAS

## LINER DATA

PACKER TYPE Fig. K NUMBER 2  
LINER DIAMETER 3"  
SCREEN TYPE REGULAR SLOT 0.01

## GRAVEL

SIZE N/A  
SACKS CALCULATED N/A TAKEN N/A

COMMENTS \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TAGGED TOP OF J 168.25

## USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
CONE \_\_\_\_\_  
BLADE 8"

CASING T.D. 174 FT.  
UNDER-REAMED 175 FT.  
INTERVAL 204 FT.  
DRILLED T.D. 206 FT.

## LINER MEASUREMENTS

	FEET	FROM	TO
TOP ASS'Y J-Collar K-Packer Steel Nipple K-Packer	2.75	168.25	171.00
STEEL BLANK	7	171.00	178.00
SCREEN	20	178.00	198.00
SAND TRAP 3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	198.00	203.00



## COMPLETION AND RECOMPLETION REPORT

WELL NUMBER	OMW-1
LEASE	BRAQUET
AREA	WEESATCHE
HOLE DIAMETER	9.875"
CASING DIAMETER	5"
REAMED DIAMETER	8"

DATE April 9, 2008  
FIELD SUPV. Wentz/Bairu  
CONTRACTOR ALL TEXAS

### LINER DATA

PACKER TYPE	Fig. K	NUMBER	2
LINER DIAMETER	3"		
SCREEN TYPE	REGULAR	SLOT	0.01

GRAVEL

SIZE	N/A		
SACKS CALCULATED	N/A	TAKEN	N/A

**COMMENTS**

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TAGGED TOP OF J	60.25
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### USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
CONE \_\_\_\_\_  
BLADE 8"


CASING T.D. 67 FT.

UNDER-  
REAMED  
INTERVAL

68 FT.

DRILLED T.D.	96 FT.
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### LINER MEASUREMENTS

			FEET	FROM	TO
TOP ASS'Y	J-Collar				
	K-Packer				
Steel Nipple	2.75		60.25	63.00	
K-Packer					
STEEL BLANK					
			7	63.00	70.00
SCREEN					
			20	70.00	90.00
SAND TRAP	3" Casing PVC				
	3"X2" Reducer PVC				
	2" Nipple PVC				
	2" Check Valve PVC	5.00	90.00	95.00	
	2" Nipple PVC				
	2" Check Valve PVC				

# COMPLETION AND RECOMPLETION REPORT

WELL NUMBER OMW-2  
 LEASE BRAQUET  
 AREA WEESATCHE  
 HOLE DIAMETER 9.875"  
 CASING DIAMETER 5"  
 REAMED DIAMETER 8"

DATE April 9, 2008  
 FIELD SUPV. Wentz/Bairu  
 CONTRACTOR ALL TEXAS

## LINER DATA

PACKER TYPE Fig. K NUMBER 2  
 LINER DIAMETER 3"  
 SCREEN TYPE REGULAR SLOT 0.01

## GRAVEL

SIZE N/A  
 SACKS CALCULATED N/A TAKEN N/A

COMMENTS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
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 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

TAGGED TOP OF J 73.25

## USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
 CONE \_\_\_\_\_  
 BLADE 8"

CASING T.D. 80 FT.  
 UNDER-REAMED INTERVAL 81 FT.  
103 FT.  
 DRILLED T.D. 109 FT.

## LINER MEASUREMENTS

		FEET	FROM	TO
TOP ASSY	J-Collar K-Packer Steel Nipple K-Packer	2.75	73.25	76.00
STEEL BLANK		7	76.00	83.00
SCREEN		20	83.00	103.00
SAND TRAP	3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	103.00	108.00

## COMPLETION AND RECOMPLETION REPORT

WELL NUMBER	OMW-3
LEASE	BRAQUET
AREA	WEESATCHE
HOLE DIAMETER	9.875"
CASING DIAMETER	5"
REAMED DIAMETER	8"

DATE April 9, 2008  
FIELD SUPV. Wentz/Bairu  
CONTRACTOR ALL TEXAS

### LINER DATA

PACKER TYPE	Fig. K	NUMBER	2
LINER DIAMETER	3"		
SCREEN TYPE	REGULAR	SLOT	0.01

GRAVEL

SIZE	N/A		
SACKS CALCULATED	N/A	TAKEN	N/A

COMMENTS \_\_\_\_\_

TAGGED TOP OF J	70.25
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### USEFUL DATA

## HOLE MEASUREMENTS





REAMER:  
CONE \_\_\_\_\_  
BLADE 8"

CASING T.D. 77 FT.

UNDER- REAMED INTERVAL	<u>78</u> FT.
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DRILLED T.D.	106 FT.
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### LINER MEASUREMENTS

			FEET	FROM	TO
TOP ASS'Y	J-Collar K-Packer Steel Nipple K-Packer		2.75	70.25	73.00
STEEL BLANK			7	73.00	80.00
SCREEN			20	80.00	100.00
SAND TRAP	3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC		5.00	100.00	105.00

# COMPLETION AND RECOMPLETION REPORT

WELL NUMBER OMW-4  
 LEASE BRAQUET  
 AREA WEESATCHE  
 HOLE DIAMETER 9.875"  
 CASING DIAMETER 5"  
 REAMED DIAMETER 8"

DATE April 10, 2008  
 FIELD SUPV. Wentz/Bairu  
 CONTRACTOR ALL TEXAS

## LINER DATA

PACKER TYPE Fig. K NUMBER 2  
 LINER DIAMETER 3"  
 SCREEN TYPE REGULAR SLOT 0.01

## GRAVEL

SIZE N/A  
 SACKS CALCULATED N/A TAKEN N/A

COMMENTS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
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 \_\_\_\_\_  
 \_\_\_\_\_

TAGGED TOP OF J 83.25

## USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
 CONE \_\_\_\_\_  
 BLADE 8"

CASING T.D. 90 FT.  
 UNDER-REAMED INTERVAL 91 FT.  
113 FT.  
 DRILLED T.D. 119 FT.

## LINER MEASUREMENTS

		FEET	FROM	TO
TOP ASS'Y	J-Collar K-Packer Steel Nipple K-Packer	2.75	83.25	86.00
STEEL BLANK		7	86.00	93.00
SCREEN		20	93.00	113.00
SAND TRAP	3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	113.00	118.00



## COMPLETION AND RECOMPLETION REPORT

WELL NUMBER	OMW-5
LEASE	BRAQUET
AREA	WEESATCHE
HOLE DIAMETER	9.875"
CASING DIAMETER	5"
REAMED DIAMETER	8"

DATE April 10, 2008  
FIELD SUPV. Wentz/Bairu  
CONTRACTOR ALL TEXAS

## HOLE MEASUREMENTS

REAMER:  
CONE \_\_\_\_\_  
BLADE 8"

### LINER DATA

PACKER TYPE	Fig. K	NUMBER	2
LINER DIAMETER	3"		
SCREEN TYPE	REGULAR	SLOT	0.01

GRAVEL

SIZE	N/A			
SACKS CALCULATED	N/A		TAKEN	N/A

COMMENTS

CASING T.D.	90	FT.
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UNDER- REAMED INTERVAL	<u>91</u> FT.
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DRILLED T.D.	119 FT.
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## LINER MEASUREMENTS

		FEET	FROM	TO
TAGGED TOP OF J	83.25			
		2.75	83.25	86.00
		7	86.00	93.00
		20	93.00	113.00
		5.00	113.00	118.00

## COMPLETION AND RECOMPLETION REPORT

WELL NUMBER	OMW-6
LEASE	BRAQUET
AREA	WEESATCHE
HOLE DIAMETER	9.875"
CASING DIAMETER	5"
REAMED DIAMETER	8"

DATE April 10, 2008  
FIELD SUPV. Wentz/Bairu  
CONTRACTOR ALL TEXAS

### LINER DATA

PACKER TYPE	Fig. K	NUMBER	2
LINER DIAMETER	3"		
SCREEN TYPE	REGULAR	SLOT	0.01

GRAVEL

SIZE	N/A		
SACKS CALCULATED	N/A	TAKEN	N/A

**COMMENTS**

TAGGED TOP OF J	87.25
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### USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
CONE \_\_\_\_\_  
BLADE 8" \_\_\_\_\_

CASING T.D.	94	FT.
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UNDER- REAMED INTERVAL	95 FT.
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DRILLED T.D.	123	FT.
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### LINER MEASUREMENTS

		FEET	FROM	TO
TOP ASS'Y	J-Collar			
	K-Packer			
	Steel Nipple	2.75	87.25	90.00
	K-Packer			
STEEL BLANK				
		7	90.00	97.00
SCREEN				
		20	97.00	117.00
SAND TRAP	3" Casing PVC			
	3"X2" Reducer PVC			
	2" Nipple PVC			
	2" Check Valve PVC	5.00	117.00	122.00
	2" Nipple PVC			
	2" Check Valve PVC			

## COMPLETION AND RECOMPLETION REPORT

WELL NUMBER	OMW-7
LEASE	BRAQUET
AREA	WEESSATCHE
HOLE DIAMETER	9.875"
CASING DIAMETER	5"
REAMED DIAMETER	8"

DATE April 10, 2008  
FIELD SUPV. Wentz/Bairu  
CONTRACTOR ALL TEXAS

### LINER DATA

PACKER TYPE	Fig. K	NUMBER	2
LINER DIAMETER	3"		
SCREEN TYPE	REGULAR	SLOT	0.01

GRAVEL

SIZE	N/A		
SACKS CALCULATED	N/A	TAKEN	N/A

**COMMENTS**

TAGGED TOP OF J            83.25





### USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
CONE \_\_\_\_\_  
BLADE 8"

CASING T.D.	<u>90</u>	FT.
UNDER- REAMED INTERVAL	<u>91</u>	FT.
	<u>113</u>	FT.
DRILLED T.D.	119	FT.

### LINER MEASUREMENTS

			FEET	FROM	TO
TOP ASS'Y	J-Collar K-Packer Steel Nipple K-Packer		2.75	83.25	86.00
STEEL BLANK			7	86.00	93.00
SCREEN			20	93.00	113.00
SAND TRAP	3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC		5.00	113.00	118.00

## COMPLETION AND RECOMPLETION REPORT

WELL NUMBER	OMW-8
LEASE	BRAQUET
AREA	WEESATCHE
HOLE DIAMETER	9.875"
CASING DIAMETER	5"
REAMED DIAMETER	8"

DATE April 14, 2008  
FIELD SUPV. Wentz/Bairu  
CONTRACTOR ALL TEXAS

### LINER DATA

PACKER TYPE	Fig. K	NUMBER	2
LINER DIAMETER	3"		
SCREEN TYPE	REGULAR	SLOT	0.01

GRAVEL

SIZE	N/A		
SACKS CALCULATED	N/A	TAKEN	N/A

[illegible]

TAGGED TOP OF J	82.25
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### USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
CONE  
BLADE 8"

CASING T.D.	89	FT.
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UNDER- REAMED INTERVAL	<u>90</u> FT.
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DRILLED T.D. 118 FT.

## LINER MEASUREMENTS

		FEET	FROM	TO
TOP ASS'Y	J-Collar K-Packer Steel Nipple K-Packer	2.75	82.25	85.00
STEEL BLANK		7	85.00	92.00
SCREEN		20	92.00	112.00
SAND TRAP	3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	112.00	117.00



# COMPLETION AND RECOMPLETION REPORT

WELL NUMBER OMW-9  
LEASE BRAQUET  
AREA WEESATCHE  
HOLE DIAMETER 9.875"  
CASING DIAMETER 5"  
REAMED DIAMETER 8"

DATE April 15, 2008  
FIELD SUPV. Wentz/Bairu  
CONTRACTOR ALL TEXAS

## LINER DATA

PACKER TYPE Fig. K NUMBER 2  
LINER DIAMETER 3"  
SCREEN TYPE REGULAR SLOT 0.01

## GRAVEL

SIZE N/A  
SACKS CALCULATED N/A TAKEN N/A

## COMMENTS

TAGGED TOP OF J 77.25

## USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
CONE \_\_\_\_\_  
BLADE 8"

CASING T.D. 84 FT.  
UNDER-REAMED INTERVAL 85 FT.  
107 FT.  
DRILLED T.D. 113 FT.

## LINER MEASUREMENTS

		FEET	FROM	TO
TOP ASS'Y	J-Collar K-Packer Steel Nipple K-Packer	2.75	77.25	80.00
STEEL BLANK		7	80.00	87.00
SCREEN		20	87.00	107.00
SAND TRAP	3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	107.00	112.00

## COMPLETION AND RECOMPLETION REPORT

WELL NUMBER	BMW-1
LEASE	BRAQUET
AREA	WEESATCHE
HOLE DIAMETER	9.875"
CASING DIAMETER	5"
REAMED DIAMETER	8"

DATE April 4, 2008  
FIELD SUPV. Wentz  
CONTRACTOR ALL TEXAS

### LINER DATA

PACKER TYPE	Fig. K	NUMBER	2
LINER DIAMETER	3"		
SCREEN TYPE	REGULAR	SLOT	0.01

GRAVEL

SIZE	N/A
SACKS CALCULATED	N/A
TAKEN	N/A

**COMMENTS**

TAGGED TOP OF J 157.25

### USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
CONE \_\_\_\_\_  
BLADE 8"

CASING T.D.	177 FT.
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UNDER-  
REAMED  
INTERVAL

178 FT.

DRILLED T.D.	209 FT.
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### LINER MEASUREMENTS

		FEET	FROM	TO
TOP ASS'Y	J-Collar			
	K-Packer			
	Steel Nipple	2.75	157.25	160.00
	K-Packer			
STEEL BLANK				
		7	160.00	167.00
SCREEN				
		20	167.00	187.00
SAND TRAP	3" Casing PVC			
	3"X2" Reducer PVC			
	2" Nipple PVC			
	2" Check Valve PVC	5.00	187.00	192.00
	2" Nipple PVC			
	2" Check Valve PVC			

# COMPLETION AND RECOMPLETION REPORT

WELL NUMBER BMW-2  
LEASE BRAQUET  
AREA WEESATCHE  
HOLE DIAMETER 9.875"  
CASING DIAMETER 5"  
REAMED DIAMETER 8"

DATE April 3, 2008  
FIELD SUPV. Wentz  
CONTRACTOR ALL TEXAS

## LINER DATA

PACKER TYPE Fig K NUMBER 2  
LINER DIAMETER 3"  
SCREEN TYPE REGULAR SLOT 0.01

## GRAVEL

SIZE N/A  
SACKS CALCULATED N/A TAKEN N/A

COMMENTS \_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TAGGED TOP OF J 168.25

## USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
CONE \_\_\_\_\_  
BLADE 8"

CASING T.D. 174 FT.  
  
UNDER-REAMED INTERVAL 175 FT.  
  
204 FT.  
  
DRILLED T.D. 206 FT.

## LINER MEASUREMENTS

		FEET	FROM	TO
TOP ASS'Y	J-Collar K-Packer Steel Nipple K-Packer	2.75	168.25	171.00
STEEL BLANK		7	171.00	178.00
SCREEN		20	178.00	198.00
SAND TRAP	3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	198.00	203.00

# COMPLETION AND RECOMPLETION REPORT

WELL NUMBER BMW-3  
LEASE BRAQUET  
AREA WEESATCHE  
HOLE DIAMETER 9.875"  
CASING DIAMETER 5"  
REAMED DIAMETER 8"

DATE April 2, 2008  
FIELD SUPV. Wentz  
CONTRACTOR ALL TEXAS

## LINER DATA

PACKER TYPE Fig. K NUMBER 2  
LINER DIAMETER 3"  
SCREEN TYPE REGULAR SLOT 0.01

## GRAVEL

SIZE N/A  
SACKS CALCULATED N/A TAKEN N/A

## COMMENTS

TAGGED TOP OF J 166.25

## USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
CONE  
BLADE 8"

CASING T.D. 173 FT.  
UNDER-REAMED 174 FT.  
INTERVAL 203 FT.  
DRILLED T.D. 205 FT.

## LINER MEASUREMENTS

	FEET	FROM	TO
TOP ASS'Y J-Collar K-Packer Steel Nipple K-Packer	2.75	166.25	169.00
STEEL BLANK	7	169.00	176.00
SCREEN	20	176.00	196.00
SAND TRAP 3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	196.00	201.00



# COMPLETION AND RECOMPLETION REPORT

WELL NUMBER BMW-4  
 LEASE BRAQUET  
 AREA WEESATCHE  
 HOLE DIAMETER 9.875"  
 CASING DIAMETER 5"  
 REAMED DIAMETER 8"

DATE April 2, 2008  
 FIELD SUPV. Wentz  
 CONTRACTOR ALL TEXAS

## LINER DATA

PACKER TYPE Fig. K NUMBER 2  
 LINER DIAMETER 3"  
 SCREEN TYPE REGULAR SLOT 0.01

## GRAVEL

SIZE N/A  
 SACKS CALCULATED N/A TAKEN N/A

## COMMENTS

TAGGED TOP OF J 154.25

## USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
 CONE \_\_\_\_\_  
 BLADE 8"

CASING T.D. 161 FT.  
 UNDER-REAMED INTERVAL 162 FT.  
191 FT.  
 DRILLED T.D. 193 FT.

## LINER MEASUREMENTS

		FEET	FROM	TO
TOP ASS'Y	J-Collar K-Packer Steel Nipple K-Packer	2.75	154.25	157.00
STEEL BLANK		7	157.00	164.00
SCREEN		20	164.00	184.00
SAND TRAP	3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	184.00	189.00

# COMPLETION AND RECOMPLETION REPORT

WELL NUMBER BMW-5  
 LEASE BRAQUET  
 AREA WEESATCHE  
 HOLE DIAMETER 9.875"  
 CASING DIAMETER 5"  
 REAMED DIAMETER 8"

DATE April 3, 2008  
 FIELD SUPV. Wentz  
 CONTRACTOR ALL TEXAS

## LINER DATA

PACKER TYPE Fig. K NUMBER 2  
 LINER DIAMETER 3"  
 SCREEN TYPE REGULAR SLOT 0.01

## GRAVEL

SIZE N/A  
 SACKS CALCULATED N/A TAKEN N/A

## COMMENTS

TAGGED TOP OF J 155.25

## USEFUL DATA

## HOLE MEASUREMENTS

REAMER:

CONE

BLADE 8"

CASING T.D. 172 FT.

UNDER-REAMED INTERVAL 173 FT.  
202 FT.

DRILLED T.D. 204 FT.

## LINER MEASUREMENTS

	FEET	FROM	TO
TOP ASS'Y J-Collar K-Packer Steel Nipple K-Packer	2.75	155.25	158.00
STEEL BLANK	7	158.00	165.00
SCREEN	20	165.00	185.00
SAND TRAP 3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	185.00	190.00

## COMPLETION AND RECOMPLETION REPORT

WELL NUMBER	BMW-6
LEASE	BRAQUET
AREA	WEESATCHE
HOLE DIAMETER	9.875"
CASING DIAMETER	5"
REAMED DIAMETER	8"

DATE March 31, 2008  
FIELD SUPV. Wentz  
CONTRACTOR ALL TEXAS

## LINER DATA

PACKER TYPE	Fig. K	NUMBER	2
LINER DIAMETER	3"		
SCREEN TYPE	REGULAR	SLOT	0.01

GRAVEL

SIZE	N/A		
SACKS CALCULATED	N/A	TAKEN	N/A

COMMENTS

TAGGED TOP OF J        162.25

### USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
CONE \_\_\_\_\_  
BLADE 8"

CASING T.D.	<u>169</u>	FT.
UNDER- REAMED INTERVAL	<u>170</u>	FT.
	<u>199</u>	FT.
DRILLED T.D.	201	FT.

### LINER MEASUREMENTS

		FEET	FROM	TO
TOP ASS'Y	J-Collar K-Packer Steel Nipple K-Packer	2.75	162.25	165.00
STEEL BLANK		7	165.00	172.00
SCREEN		20	172.00	192.00
SAND TRAP	3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	192.00	197.00

## COMPLETION AND RECOMPLETION REPORT

DATE March 28, 2008  
FIELD SUPV. Wentz  
CONTRACTOR ALL TEXAS

## HOLE MEASUREMENTS

REAMER:  
CONE \_\_\_\_\_  
BLADE 8"

CASING T.D.	167 FT.
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UNDER-REAMED INTERVAL 168 FT.

DRILLED T.D.	199 FT.
--------------	---------

## LINER MEASUREMENTS

			FEET	FROM	TO
TOP ASS'Y	J-Collar				
	K-Packer	☒			
	Steel Nipple		2.75	160.25	163.00
	K-Packer	☒			
STEEL BLANK					
			7	163.00	170.00
SCREEN					
			20	170.00	190.00
SAND TRAP	3" Casing PVC				
	3"X2" Reducer PVC				
	2" Nipple PVC				
	2" Check Valve PVC	☒	5.00	190.00	195.00
	2" Nipple PVC				
	2" Check Valve PVC	☒			



# COMPLETION AND RECOMPLETION REPORT

WELL NUMBER BMW-8  
 LEASE BRAQUET  
 AREA WEESATCHE  
 HOLE DIAMETER 9.875"  
 CASING DIAMETER 5"  
 REAMED DIAMETER 8"

DATE March 27, 2008  
 FIELD SUPV. Wentz  
 CONTRACTOR ALL TEXAS

## LINER DATA

PACKER TYPE Fig. K NUMBER 2  
 LINER DIAMETER 3"  
 SCREEN TYPE REGULAR SLOT 0.01

## GRAVEL

SIZE N/A  
 SACKS CALCULATED N/A TAKEN N/A

## COMMENTS

TAGGED TOP OF J 155.25

## USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
 CONE  
 BLADE 8"

CASING T.D. 163 FT.  
 UNDER-REAMED INTERVAL 164 FT.  
193 FT.  
 DRILLED T.D. 195 FT.

## LINER MEASUREMENTS

		FEET	FROM	TO
TOP ASS'Y	J-Collar K-Packer Steel Nipple K-Packer	2.75	155.25	158.00
STEEL BLANK		7	158.00	165.00
SCREEN		20	165.00	185.00
SAND TRAP	3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	185.00	190.00

# COMPLETION AND RECOMPLETION REPORT

WELL NUMBER BMW-9  
 LEASE BRAQUET  
 AREA WEESATCHE  
 HOLE DIAMETER 9.875"  
 CASING DIAMETER 5"  
 REAMED DIAMETER 8"

DATE March 26, 2008  
 FIELD SUPV. Wentz  
 CONTRACTOR ALL TEXAS

## LINER DATA

PACKER TYPE Fig K NUMBER 2  
 LINER DIAMETER 3"  
 SCREEN TYPE REGULAR SLOT 0.01

## GRAVEL

SIZE N/A  
 SACKS CALCULATED N/A TAKEN N/A

## COMMENTS

TAGGED TOP OF J 158.25

## USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
 CONE \_\_\_\_\_  
 BLADE 8"

CASING T.D. 165 FT.  
 UNDER-REAMED INTERVAL 166 FT.  
195 FT.  
 DRILLED T.D. 197 FT.

## LINER MEASUREMENTS

		FEET	FROM	TO
TOP ASS'Y	J-Collar K-Packer Steel Nipple K-Packer	2.75	158.25	161.00
STEEL BLANK		7	161.00	168.00
SCREEN		20	168.00	188.00
SAND TRAP	3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	188.00	193.00

## COMPLETION AND RECOMPLETION REPORT

DATE March 17, 2008

FIELD SUPV. **Wentz**

CONTRACTOR ALL TEXAS

## HOLE MEASUREMENTS

REAMER:

CONE

BLADE 8"

CASING T.D.	162 FT.
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192 FT.

DRILLED T.D. 194 FT.

## LINER MEASUREMENTS

FEET | FROM | TO

TOP ASS'Y	J-Collar			
	K-Packer			
	Steel Nipple			
	K-Packer	2.75	155.25	158.00

STEEL				
BLANK	7	158.00	165.00	

SCREEN			
	20	165.00	185.00

SAND TRAP	3" Casing PVC			
	3"X2" Reducer PVC			
	2" Nipple PVC			
	2" Check Valve PVC	5.00	185.00	190.00
	2" Nipple PVC			
	2" Check Valve PVC			

SAND	2" Nipple PVC				
TRAP	2" Check Valve PVC	5.00	185.00	190.00	

# COMPLETION AND RECOMPLETION REPORT

WELL NUMBER BMW-11  
LEASE BRAQUET  
AREA WEESATCHE  
HOLE DIAMETER 9.875"  
CASING DIAMETER 5"  
REAMED DIAMETER 8"

DATE March 25, 2008

FIELD SUPV. Wentz

CONTRACTOR ALL TEXAS

## LINER DATA

PACKER TYPE Fig. K NUMBER 2  
LINER DIAMETER 3"  
SCREEN TYPE REGULAR SLOT 0.01

## GRAVEL

SIZE N/A  
SACKS CALCULATED N/A TAKEN N/A

COMMENTS \_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TAGGED TOP OF J 137.25

## USEFUL DATA

## HOLE MEASUREMENTS

REAMER:

CONE \_\_\_\_\_

BLADE 8"

CASING T.D. 144 FT.

UNDER-REAMED INTERVAL 145 FT.  
174 FT.

DRILLED T.D. 176 FT.

## LINER MEASUREMENTS

	FEET	FROM	TO
TOP ASS'Y J-Collar K-Packer Steel Nipple K-Packer	2.75	137.25	140.00
STEEL BLANK	7	140.00	147.00
SCREEN	20	147.00	167.00
SAND TRAP 3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	167.00	172.00



# COMPLETION AND RECOMPLETION REPORT

WELL NUMBER BMW-12  
LEASE BRAQUET  
AREA WEESATCHE  
HOLE DIAMETER 9.875"  
CASING DIAMETER 5"  
REAMED DIAMETER 8"

DATE March 19, 2008  
FIELD SUPV. Wentz  
CONTRACTOR ALL TEXAS

## HOLE MEASUREMENTS

REAMER:  
CONE  
BLADE 8"

## LINER DATA

PACKER TYPE Fig. K NUMBER 2  
LINER DIAMETER 3"  
SCREEN TYPE REGULAR SLOT 0.01

## GRAVEL

SIZE N/A  
SACKS CALCULATED N/A TAKEN N/A

## COMMENTS

TAGGED TOP OF J 135.25

CASING T.D. 142 FT.  
UNDER-REAMED INTERVAL 143 FT.  
172 FT.  
DRILLED T.D. 174 FT.

## LINER MEASUREMENTS

	FEET	FROM	TO
TOP ASS'Y J-Collar K-Packer Steel Nipple K-Packer	2.75	135.25	138.00
STEEL BLANK	7	138.00	145.00
SCREEN	20	145.00	165.00
SAND TRAP 3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	165.00	170.00

## USEFUL DATA

# COMPLETION AND RECOMPLETION REPORT

WELL NUMBER BMW-13  
LEASE BRAQUET  
AREA WEESATCHE  
HOLE DIAMETER 9.875"  
CASING DIAMETER 5"  
REAMED DIAMETER 8"

DATE March 18, 2008

FIELD SUPV. Wentz

CONTRACTOR ALL TEXAS

## LINER DATA

PACKER TYPE Fig. K NUMBER 2  
LINER DIAMETER 3"  
SCREEN TYPE REGULAR SLOT 0.01

## GRAVEL

SIZE N/A  
SACKS CALCULATED N/A TAKEN N/A

## COMMENTS

TAGGED TOP OF J 150.25

## USEFUL DATA

## HOLE MEASUREMENTS

REAMER:

CONE

BLADE 8"

CASING T.D. 156 FT.  
UNDER-REAMED INTERVAL 157 FT.  
186 FT.  
DRILLED T.D. 188 FT.

## LINER MEASUREMENTS

	FEET	FROM	TO
TOP ASS'Y J-Collar K-Packer Steel Nipple K-Packer	2.75	150.25	153.00
STEEL BLANK	7	153.00	160.00
SCREEN	20	160.00	180.00
SAND TRAP 3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	180.00	185.00

# COMPLETION AND RECOMPLETION REPORT

WELL NUMBER BMW-14  
 LEASE BRAQUET  
 AREA WEESATCHE  
 HOLE DIAMETER 9.875"  
 CASING DIAMETER 5"  
 REAMED DIAMETER 8"

DATE March 25, 2008  
 FIELD SUPV. Wentz  
 CONTRACTOR ALL TEXAS

## LINER DATA

PACKER TYPE Fig. K NUMBER 2  
 LINER DIAMETER 3"  
 SCREEN TYPE REGULAR SLOT 0.01

## GRAVEL

SIZE N/A  
 SACKS CALCULATED N/A TAKEN N/A

## COMMENTS

TAGGED TOP OF J 158.25

## USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
 CONE  
 BLADE 8"

CASING T.D. 165 FT.  
 UNDER-REAMED INTERVAL 166 FT.  
195 FT.  
 DRILLED T.D. 197 FT.

## LINER MEASUREMENTS

		FEET	FROM	TO
TOP ASS'Y	J-Collar K-Packer Steel Nipple K-Packer	2.75	158.25	161.00
STEEL BLANK		7	161.00	168.00
SCREEN		20	168.00	188.00
SAND TRAP	3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	188.00	193.00

## COMPLETION AND RECOMPLETION REPORT

WELL NUMBER	BMW-15
LEASE	BRAQUET
AREA	WEESATCHE
HOLE DIAMETER	9.875"
CASING DIAMETER	5"
REAMED DIAMETER	8"

DATE March 24, 2008  
FIELD SUPV. Wentz  
CONTRACTOR ALL TEXAS

### LINER DATA

PACKER TYPE	Fig. K	NUMBER	2
LINER DIAMETER	3"		
SCREEN TYPE	REGULAR	SLOT	0.01

GRAVEL

SIZE	N/A
SACKS CALCULATED	N/A
TAKEN	N/A

COMMENTS \_\_\_\_\_

TAGGED TOP OF J	171,25
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### USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
CONE \_\_\_\_\_  
BLADE 8"

CASING T.D.	178	FT.
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UNDER- REAMED INTERVAL	<u>179</u> FT.
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DRILLED T.D.	210 FT.
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## LINER MEASUREMENTS

		FEET	FROM	TO
TOP ASS'Y	J-Collar			
	K-Packer			
	Steel Nipple	2.75	171.25	174.00
	K-Packer			
STEEL BLANK				
		7	174.00	181.00
SCREEN				
		20	181.00	201.00
SAND TRAP	3" Casing PVC			
	3"X2" Reducer PVC			
	2" Nipple PVC			
	2" Check Valve PVC	5.00	201.00	206.00
	2" Nipple PVC			
	2" Check Valve PVC			



# COMPLETION AND RECOMPLETION REPORT

WELL NUMBER BMW-16  
 LEASE BRAQUET  
 AREA WEESATCHE  
 HOLE DIAMETER 9.875"  
 CASING DIAMETER 5"  
 REAMED DIAMETER 8"

DATE March 20, 2008  
 FIELD SUPV. Wentz  
 CONTRACTOR ALL TEXAS

## LINER DATA

PACKER TYPE Fig. K NUMBER 2  
 LINER DIAMETER 3"  
 SCREEN TYPE REGULAR SLOT 0.01

## GRAVEL

SIZE N/A  
 SACKS CALCULATED N/A TAKEN N/A

## COMMENTS

TAGGED TOP OF J 167.25

## USEFUL DATA

## HOLE MEASUREMENTS

REAMER:

CONE

BLADE 8"

CASING T.D. 174 FT.  
 UNDER-REAMED INTERVAL 175 FT.  
204 FT.  
 DRILLED T.D. 206 FT.

## LINER MEASUREMENTS

	FEET	FROM	TO
TOP ASS'Y J-Collar K-Packer Steel Nipple K-Packer	2.75	167.25	170.00
STEEL BLANK	7	170.00	177.00
SCREEN	20	177.00	197.00
SAND TRAP 3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	197.00	202.00

## COMPLETION AND RECOMPLETION REPORT

WELL NUMBER	BMW-17
LEASE	BRAQUET
AREA	WEESATCHIE
HOLE DIAMETER	9.875"
CASING DIAMETER	5"
REAMED DIAMETER	8"

DATE March 24, 2008  
FIELD SUPV. Wentz  
CONTRACTOR ALL TEXAS

### LINER DATA

PACKER TYPE	Fig. K	NUMBER	2
LINER DIAMETER	3"		
SCREEN TYPE	REGULAR	SLOT	0.01

**GRAVEL**

SIZE	N/A		
SACKS CALCULATED	N/A	TAKEN	N/A

## COMMENTS

TAGGED TOP OF J	153.25
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### USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
CONE  
BLADE 8"

CASING T.D.	159 FT.
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UNDER-REAMED INTERVAL 160 FT.

DRILLED T.D.	191 FT.
--------------	---------

### LINER MEASUREMENTS

		FEET	FROM	TO
TOP ASS'Y	J-Collar K-Packer Steel Nipple K-Packer	2.75	153.25	156.00
STEEL BLANK		7	156.00	163.00
SCREEN		20	163.00	183.00
SAND TRAP	3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	183.00	188.00

## COMPLETION AND RECOMPLETION REPORT

DATE March 20, 2008  
FIELD SUPV. Wentz  
CONTRACTOR ALL TEXAS

## HOLE MEASUREMENTS

PACKER TYPE	Fig. K	NUMBER	2
LINER DIAMETER	3"		
SCREEN TYPE	REGULAR	SLOT	0.01

CASING T.D.	<u>162</u>	FT.
UNDER- REAMED INTERVAL	<u>163</u>	FT.
	<u>192</u>	FT.
DRILLED T.D.	<u>194</u>	FT.

**COMMENTS**

TAGGED TOP OF J      155.25

		FEET	FROM	TO
TOP ASS'Y	J-Collar			
	K-Packer			
	Steel Nipple	2.75	155.25	158.00
	K-Packer			
STEEL BLANK				
		7	158.00	165.00
SCREEN				
		20	165.00	185.00
SAND TRAP	3" Casing PVC			
	3"X2" Reducer PVC			
	2" Nipple PVC			
	2" Check Valve PVC	5.00	185.00	190.00
	2" Nipple PVC			
	2" Check Valve PVC			

# COMPLETION AND RECOMPLETION REPORT

WELL NUMBER BMW-19  
LEASE BRAQUET  
AREA WEESATCHE  
HOLE DIAMETER 9.875"  
CASING DIAMETER 5"  
REAMED DIAMETER 8"

DATE April 8, 2008

FIELD SUPV. Wentz

CONTRACTOR ALL TEXAS

## LINER DATA

PACKER TYPE Fig. K NUMBER 2  
LINER DIAMETER 3"  
SCREEN TYPE REGULAR SLOT 0.01

## GRAVEL

SIZE N/A  
SACKS CALCULATED N/A TAKEN N/A

## COMMENTS

TAGGED TOP OF J 161.25

## USEFUL DATA

## HOLE MEASUREMENTS

REAMER:

CONE

BLADE 8"

CASING T.D. 186 FT.

UNDER-REAMED  
INTERVAL 187 FT.

216 FT.

DRILLED T.D. 218 FT.

## LINER MEASUREMENTS

		FEET	FROM	TO
TOP ASS'Y	J-Collar K-Packer Steel Nipple K-Packer	2.75	161.25	164.00
STEEL BLANK		7	164.00	171.00
SCREEN		20	171.00	191.00
SAND TRAP	3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	191.00	196.00



# COMPLETION AND RECOMPLETION REPORT

WELL NUMBER BMW-20  
 LEASE BRAQUET  
 AREA WEESATCHE  
 HOLE DIAMETER 9.875"  
 CASING DIAMETER 5"  
 REAMED DIAMETER 8"

DATE April 8, 2008  
 FIELD SUPV. Wentz  
 CONTRACTOR ALL TEXAS

## LINER DATA

PACKER TYPE Fig K NUMBER 2  
 LINER DIAMETER 3"  
 SCREEN TYPE REGULAR SLOT 0.01

## GRAVEL

SIZE N/A  
 SACKS CALCULATED N/A TAKEN N/A

## COMMENTS

TAGGED TOP OF J 157.25

## USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
 CONE \_\_\_\_\_  
 BLADE 8"

CASING T.D. 164 FT.  
 UNDER-REAMED INTERVAL 165 FT.  
194 FT.  
 DRILLED T.D. 196 FT.

## LINER MEASUREMENTS

	FEET	FROM	TO
TOP ASS'Y J-Collar K-Packer Steel Nipple K-Packer	2.75	157.25	160.00
STEEL BLANK	7	160.00	167.00
SCREEN	20	167.00	187.00
SAND TRAP 3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	187.00	192.00

# COMPLETION AND RECOMPLETION REPORT

WELL NUMBER BMW-21  
LEASE BRAQUET  
AREA WEESATCHE  
HOLE DIAMETER 9.875"  
CASING DIAMETER 5"  
REAMED DIAMETER 8"

DATE April 7, 2008  
FIELD SUPV. Wentz  
CONTRACTOR ALL TEXAS

## LINER DATA

PACKER TYPE Fig. K NUMBER 2  
LINER DIAMETER 3"  
SCREEN TYPE REGULAR SLOT 0.01

## GRAVEL

SIZE N/A  
SACKS CALCULATED N/A TAKEN N/A

## COMMENTS

TAGGED TOP OF J 168.25

## USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
CONE  
BLADE 8"

CASING T.D. 174 FT.  
UNDER-REAMED INTERVAL 175 FT.  
204 FT.  
DRILLED T.D. 206 FT.

## LINER MEASUREMENTS

	FEET	FROM	TO
TOP ASSY J-Collar K-Packer Steel Nipple K-Packer	2.75	168.25	171.00
STEEL BLANK	7	171.00	178.00
SCREEN	20	178.00	198.00
SAND TRAP 3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	198.00	203.00

# COMPLETION AND RECOMPLETION REPORT

WELL NUMBER BMW-22  
 LEASE BRAQUET  
 AREA WEESATCHE  
 HOLE DIAMETER 9.875"  
 CASING DIAMETER 5"  
 REAMED DIAMETER 8"

DATE April 8, 2008  
 FIELD SUPV. Wentz  
 CONTRACTOR ALL TEXAS

## LINER DATA

PACKER TYPE Fig. K NUMBER 2  
 LINER DIAMETER 3"  
 SCREEN TYPE REGULAR SLOT 0.01

## GRAVEL

SIZE N/A  
 SACKS CALCULATED N/A TAKEN N/A

## COMMENTS

TAGGED TOP OF J 170.25

## USEFUL DATA

## HOLE MEASUREMENTS

REAMER:  
 CONE \_\_\_\_\_  
 BLADE 8"

CASING T.D. 176 FT.  
 UNDER-REAMED INTERVAL 177 FT.  
206 FT.  
 DRILLED T.D. 208 FT.

## LINER MEASUREMENTS

	FEET	FROM	TO
TOP ASS'Y J-Collar K-Packer Steel Nipple K-Packer	2.75	170.25	173.00
STEEL BLANK	7	173.00	180.00
SCREEN	20	180.00	200.00
SAND TRAP 3" Casing PVC 3"X2" Reducer PVC 2" Nipple PVC 2" Check Valve PVC 2" Nipple PVC 2" Check Valve PVC	5.00	200.00	205.00

**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

DATE: 03/18/08  
WELL NO: 32201 BMW-1  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>RODNEY</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>177</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 17,57,97,137

**SING**

JOINTS 10  
TOP JOINT

SURFACE ELEVATION 228.51  
TOP OF CASING ABOVE SURFACE 230.72

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>40</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		



**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

DATE: 03/18/08  
WELL NO: 32201 BMW-2  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>RODNEY</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>174</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 15,55,95,135

**LOGGING**

JOINTS 9  
TOP JOINT

SURFACE ELEVATION 228.93  
TOP OF CASING ABOVE SURFACE 231.16

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>39</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

E: 03/14/08

WELL NO: 32201 BMW-3

LEASE: BRAQUET

AREA: WEESATCHE

COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>RODNEY</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>173</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 14,54,94,134

**ING**

JOINTS 9

TOP JOINT

SURFACE ELEVATION 228.99

TOP OF CASING ABOVE SURFACE 231.44

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>39</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>ALAN</u>		

**URANIUM ENERGY CORPORATION  
WEESATCHE URANIUM PROJECT  
WELL CASING REPORT**

E: 03/13/08

WELL NO: 32201 BMW-4

LEASE: BRAQUET

AREA: WEESATCHE

COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>ALONZO RAMERO</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>161</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 6,46,86,126

ING

JOINTS 9

TOP JOINT

SURFACE ELEVATION 233.52

TOP OF CASING ABOVE SURFACE 236.25

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>37</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION  
WEESATCHE URANIUM PROJECT  
WELL CASING REPORT**

E: 03/06/08

WELL NO: 32201 BMW-5

LEASE: BRAQUET

AREA: WEESATCHE

COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>ALONZO RAMERO</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>172</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 13,53,93,133

**ING**

JOINTS 9

TOP JOINT

SURFACE ELEVATION 236.07

TOP OF CASING ABOVE SURFACE 238.37

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>39</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

DATE: 03/04/08  
WELL NO: 32201 BMW-6  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>ALONZO RAMERO</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>169</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 10,50,90,130

**LOGGING**

JOINTS 9  
TOP JOINT

SURFACE ELEVATION 234.48  
TOP OF CASING ABOVE SURFACE 236.91

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>38</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		



**URANIUM ENERGY CORPORATION  
WEESATCHE URANIUM PROJECT  
WELL CASING REPORT**

E: 03/03/08  
WELL NO: 32201 BMW-7  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>ALONZO RAMERO</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>167</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 7,47,87,127

**ING**

JOINTS 9  
TOP JOINT

SURFACE ELEVATION 236.78  
TOP OF CASING ABOVE SURFACE 239.66

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>38</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

E: 02/29/08  
WELL NO: 32201 BMW-8  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>ALONZO RAMERO</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>163</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 5,45,85,125

ING

JOINTS 9  
TOP JOINT

SURFACE ELEVATION 229.29  
TOP OF CASING ABOVE SURFACE 231.25

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>37</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION  
WEESATCHE URANIUM PROJECT  
WELL CASING REPORT**

DATE: 02/28/08  
WELL NO: 32201 BMW-9  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>ALONZO RAMERO</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>165</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 16,56,96,136

**LOGGING**

JOINTS 9  
TOP JOINT

SURFACE ELEVATION 230.79  
TOP OF CASING ABOVE SURFACE 232.12

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>38</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

DATE: 02/27/08  
WELL NO: 32201 BMW-10  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>ALONZO RAMERO</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>162</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 17,57,97,137

**LOGGING**

JOINTS 9  
TOP JOINT

SURFACE ELEVATION 225.48  
TOP OF CASING ABOVE SURFACE 227.80

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>37</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

E: 02/21/08  
WELL NO: 32201 BMW-11  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>ALONZO RAMERO</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>144</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 21,61,81,121

**ING**

JOINTS 8  
TOP JOINT

SURFACE ELEVATION 215.23  
TOP OF CASING ABOVE SURFACE 217.44

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>33</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>3.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		



**URANIUM ENERGY CORPORATION  
WEESATCHE URANIUM PROJECT  
WELL CASING REPORT**

DATE: 02/19/08  
WELL NO: 32201 BMW-12  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>ALONZO RAMERO</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>142</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 12,32,72,122

**LOGGING**

JOINTS 8  
TOP JOINT

SURFACE ELEVATION 214.61  
TOP OF CASING ABOVE SURFACE 217.11

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>32</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>3.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

DATE: 02/18/08  
WELL NO: 32201 BMW-13  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>ALONZO RAMERO</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>156</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 25,45,85,125

**JOINTING**

JOINTS 8  
TOP JOINT

SURFACE ELEVATION 223.53  
TOP OF CASING ABOVE SURFACE 225.76

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>35</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

DATE: 02/20/08  
WELL NO: 32201 BMW-14  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>ALONZO RAMERO</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>165</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 10,50,90,144

**LOGGING**

JOINTS 9  
TOP JOINT

SURFACE ELEVATION 232.50  
TOP OF CASING ABOVE SURFACE 234.51

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>38</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>NO</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION  
WEESATCHE URANIUM PROJECT  
WELL CASING REPORT**

E: 02/15/08  
WELL NO: 32201 BMW-15  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>ALONZO RAMERO</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>178</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 20,80,120,160

**JOINTING**

JOINTS 10  
TOP JOINT

SURFACE ELEVATION 237.69  
TOP OF CASING ABOVE SURFACE 239.85

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>41</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

E: 02/14/08

WELL NO: 32201 BMW-16

LEASE: BRAQUET

AREA: WEESATCHE

COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>ALONZO RAMERO</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>174</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 33,73,113,153

**ING**

JOINTS 9

TOP JOINT

SURFACE ELEVATION 230.59

TOP OF CASING ABOVE SURFACE 232.68

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>39</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		



**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

DATE: 02/13/08  
WELL NO: 32201 BMW-17  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>ALONZO RAMERO</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>159</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 22,40,80,120

**LOGGING**

JOINTS 8  
TOP JOINT

SURFACE ELEVATION 225.22  
TOP OF CASING ABOVE SURFACE 227.25

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>37</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

DATE: 02/12/08  
WELL NO: 32201 BMW-18  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>ALONZO RAMERO</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>162</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 22,60,80,120

**JOINTING**

JOINTS 9  
TOP JOINT

SURFACE ELEVATION 222.94  
TOP OF CASING ABOVE SURFACE 225.18

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>37</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>100</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

DATE: 03/26/08  
WELL NO: 32201 BMW-19  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>RODNEY</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>168</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 15,55,95,135

**LOGGING**

JOINTS 9  
TOP JOINT

SURFACE ELEVATION 225.39  
TOP OF CASING ABOVE SURFACE 227.83

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>38</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>ALAN</u>		

**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

E: 03/25/08  
WELL NO: 32201 BMW-20  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>RODNEY</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>164</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 12,52,92,132

**ING**

JOINTS 10  
TOP JOINT

SURFACE ELEVATION 226.66  
TOP OF CASING ABOVE SURFACE 229.21

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>37</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

E: 03/24/08  
WELL NO: 32201 BMW-21  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>RODNEY</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>174</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 15,55,95,135

**CASING**

JOINTS 9  
TOP JOINT

SURFACE ELEVATION 226.93  
TOP OF CASING ABOVE SURFACE 229.06

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>39</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		



**URANIUM ENERGY CORPORATION  
WEESATCHE URANIUM PROJECT  
WELL CASING REPORT**

E: 03/19/08  
WELL NO: 32201 BMW-22  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>RODNEY</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>176</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 17,57,97,137

**ING**

JOINTS 9  
TOP JOINT

SURFACE ELEVATION 227.75  
TOP OF CASING ABOVE SURFACE 229.75

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>40</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION  
WEESATCHE URANIUM PROJECT  
WELL CASING REPORT**

E: 04/02/08  
WELL NO: 32201 OMW-1  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>RODNEY</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>67</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 43

**SING**

JOINTS 4  
TOP JOINT

SURFACE ELEVATION 221.46  
TOP OF CASING ABOVE SURFACE 223.57

**CEMENT**

BARRELS CEMENT	<u>5.2</u>	SACKS CEMENT	<u>15</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>1.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

DATE: 04/04/08  
WELL NO: 32201 OMW-2  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>RODNEY</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>80</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 10,40,70

**SING**

JOINTS 5  
TOP JOINT

SURFACE ELEVATION 230.73  
TOP OF CASING ABOVE SURFACE 232.43

**CEMENT**

BARRELS CEMENT	<u>6.2</u>	SACKS CEMENT	<u>18</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>2.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION  
WEESATCHE URANIUM PROJECT  
WELL CASING REPORT**

E: 04/02/08  
WELL NO: 32201 OMW-3  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>BRANDON</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>77</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 17,57

**ING**

JOINTS 4  
TOP JOINT

SURFACE ELEVATION 226.84  
TOP OF CASING ABOVE SURFACE 228.85

**CEMENT**

BARRELS CEMENT	<u>5.9</u>	SACKS CEMENT	<u>17</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>2.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION  
WEESATCHE URANIUM PROJECT  
WELL CASING REPORT**

E: 04/03/08

WELL NO: 32201 OMW-4

LEASE: BRAQUET

AREA: WEESATCHE

COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>BRANDON</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>90</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 10,50,80

**ING**

JOINTS 5

TOP JOINT

SURFACE ELEVATION 236.26

TOP OF CASING ABOVE SURFACE 237.92

**CEMENT**

BARRELS CEMENT	<u>6.9</u>	SACKS CEMENT	<u>20</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>2.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		



**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

E: 04/02/08

WELL NO: 32201 OMW-5

LEASE: BRAQUET

AREA: WEESATCHE

COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>BRANDON</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>90</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 10,50,80

**SING**

JOINTS 5

TOP JOINT

SURFACE ELEVATION 235.46

TOP OF CASING ABOVE SURFACE 237.60

**CEMENT**

BARRELS CEMENT	<u>6.9</u>	SACKS CEMENT	<u>20</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>2.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

E: 04/03/08

WELL NO: 32201 OMW-6

LEASE: BRAQUET

AREA: WEESATCHE

COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>RODNEY</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>94</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 14,44,74

**JING**

JOINTS 5

TOP JOINT

SURFACE ELEVATION 233.57

TOP OF CASING ABOVE SURFACE 235.73

**CEMENT**

BARRELS CEMENT	<u>7.3</u>	SACKS CEMENT	<u>21</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>2.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

DATE: 04/02/08  
WELL NO: 32201 OMW-7  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>RODNEY</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>90</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 10,50,80

**JOINTING**

JOINTS 5  
TOP JOINT

SURFACE ELEVATION 235.05  
TOP OF CASING ABOVE SURFACE 236.98

**CEMENT**

BARRELS CEMENT	<u>6.9</u>	SACKS CEMENT	<u>20</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>2.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

E: 04/03/08

WELL NO: 32201 OMW-8

LEASE: BRAQUET

AREA: WEESATCHE

COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>BRANDON</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>89</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 9,49,79

**CASING**

JOINTS 5

TOP JOINT

SURFACE ELEVATION 230.80

TOP OF CASING ABOVE SURFACE 232.94

**CEMENT**

BARRELS CEMENT	<u>6.9</u>	SACKS CEMENT	<u>20</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>2.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

E: 04/03/08

WELL NO: 32201 OMW-9

LEASE: BRAQUET

AREA: WEESATCHE

COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>RODNEY</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>84</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 14,44,74

**ING**

JOINTS 5

TOP JOINT

SURFACE ELEVATION 228.31

TOP OF CASING ABOVE SURFACE 230.39

**CEMENT**

BARRELS CEMENT	<u>6.6</u>	SACKS CEMENT	<u>19</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>2.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		



**URANIUM ENERGY CORPORATION  
WEESATCHE URANIUM PROJECT  
WELL CASING REPORT**

E: 04/01/08

WELL NO: 32201 PTW-1

LEASE: BRAQUET

AREA: WEESATCHE

COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>RODNEY</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>158</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 18,48,88,128

**JING**

JOINTS 9

TOP JOINT

SURFACE ELEVATION 224.03

TOP OF CASING ABOVE SURFACE 226.49

**CEMENT**

BARRELS CEMENT	<u>12.4</u>	SACKS CEMENT	<u>36</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION  
WEESATCHE URANIUM PROJECT  
WELL CASING REPORT**

E: 04/01/08

WELL NO: 32201 PTW-2

LEASE: BRAQUET

AREA: WEESATCHE

COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>BRANDON</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>179</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 19,59,99,139

**ING**

JOINTS 9

TOP JOINT

SURFACE ELEVATION 233.62

TOP OF CASING ABOVE SURFACE 235.95

**CEMENT**

BARRELS CEMENT	<u>14.2</u>	SACKS CEMENT	<u>41</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

E: 03/31/08

WELL NO: 32201 PTW-3

LEASE: BRAQUET

AREA: WEESATCHE

COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>BRANDON</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>174</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 16,56,96,136

**ING**

JOINTS 9

TOP JOINT

SURFACE ELEVATION 236.63

TOP OF CASING ABOVE SURFACE 238.93

**CEMENT**

BARRELS CEMENT	<u>13.5</u>	SACKS CEMENT	<u>39</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

E: 03/28/08  
WELL NO: 32201 PTW-4  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>RODNEY</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>176</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 17,57,97,137

**SING**

JOINTS 9  
TOP JOINT

SURFACE ELEVATION 231.10  
TOP OF CASING ABOVE SURFACE 233.39

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>40</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		

**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

E: 03/31/08

WELL NO: 32201 PTW-5

LEASE: BRAQUET

AREA: WEESATCHE

COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>RODNEY</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>175</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 17,57,97,137

**JOINTING**

JOINTS 9

TOP JOINT

SURFACE ELEVATION 232.72

TOP OF CASING ABOVE SURFACE 235.00

**CEMENT**

BARRELS CEMENT	<u>13.8</u>	SACKS CEMENT	<u>40</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		



**URANIUM ENERGY CORPORATION**  
**WEESATCHE URANIUM PROJECT**  
**WELL CASING REPORT**

E: 03/27/08  
WELL NO: 32201 PTW-6  
LEASE: BRAQUET  
AREA: WEESATCHE  
COUNTY: GOLIAD

**DRILLING DATA:**

DRILLER:	<u>RODNEY</u>	COMPANY	<u>DIGGS DRILLING</u>
REAMED DEPTH:	<u>174</u>	DRIFT	<u></u>
HOLE SIZE:	<u>9.875"</u>	MUD-TYPE:	<u>PHP/GEL</u>
VIS:	<u></u>	WEIGHT	<u>8.8#/GA</u>
DRILLING TIME	<u></u>		

REMARKS: Centralizers at 15,55,95,135

**SING**

JOINTS 9  
TOP JOINT

SURFACE ELEVATION 227.51  
TOP OF CASING ABOVE SURFACE 229.93

**CEMENT**

BARRELS CEMENT	<u>0</u>	SACKS CEMENT	<u>39</u>
TYPE CEMENT	<u>0</u>	LB GEL	<u>50</u>
LB CACL2	<u>0</u>	CEMENT WT.	<u>13.4</u>

**DISPLACEMENT**

BBL FLUID	<u>4.0</u>	BARITE SACKS	<u>0.00</u>
GEL SACKS	<u>0.00</u>	RETURNS	<u>YES</u>
CEMENTER	<u>BRICE BAROS</u>		